

**CENSUS OF FATAL OCCUPATIONAL
INJURIES
MICHIGAN 2011**

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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, Management 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 139 occupational fatalities reported to the Michigan CFOI Program during the year 2011. Various categories related to these fatalities are summarized below.

- Transportation incidents led all fatal events and accounted for 46 (33 percent) of the 139 fatal occupational injuries during 2011. This was followed by Violence and Other Injuries by Persons or Animals with 33 fatalities (24 percent). (Table 1)
- Forty-three percent of the fatally injured Michigan workers were 35-54 years of age. (Table 2)
- Based on gender, 93 percent of Michigan's fatally injured workers were men. (Table 2)
- Eighty-three 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 26, followed by Transportation and Material Moving with 21. (Table 3)
- Industries with the largest number of Michigan fatal work injuries during 2011 were Agriculture, Forestry, Fishing and Hunting reporting 25 and Construction with 21. (Table 4)
- Vehicles were identified as the greatest source of injury with 43 reported during 2011. This was followed by Persons, Plants, Animals and Minerals with 41 and Machinery with 17. (Table 5)
- Multiple traumatic injuries and disorders was the leading type of injury during 2011, reporting 50 and Other Traumatic Injuries and Disorders followed with 39 injuries.
- The Parts of body reported as most affected in the census was Multiple Body Parts. It reported 57 cases and Head was reported in 26 of the cases.
- In the category of Worker Activity, Vehicular and Transportation Operations was reported in 46 fatalities and Construction, Repairing and Cleaning was reported in 29 cases.
- Street or Highway was reported as the location of the fatality in 32 cases and Industrial Place or Premise was reported in 31 cases.

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan 2011**

Event or Exposure ¹	Fatalities	
	Number	Percent
Total	139	100
Transportation Incident	46	33
Aircraft incident	7	5
Animal and other non-motorized vehicle transportation incident	1	1
Pedestrian vehicular incident	7	5
Roadway incident involving motorized land vehicle	24	17
Nonroadway incident involving motorized land vehicle	7	5
Violence and Other Injuries by Persons or Animals	33	24
Intentional injury by other person	15	11
Self-inflicted injury intentional	16	11
Fall, Slip, Trip	24	17
Fall on same level	5	3
Fall to lower level	18	13
Contact with Objects and Equipment	21	15
Struck by object or equipment	10	7
Caught in or compressed by equipment or objects	8	5
Struck, caught or crushed in collapsing structure, equipment or material	3	1
Exposure to Harmful Substances or Environments	12	9
Exposure to electricity	5	3
Exposure to temperature extremes	2	1
Exposure to other harmful substances	4	2
Fire or Explosion	3	2
Fire	1	1

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 2011 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 2011

Worker Characteristics	Number	<u>Fatalities</u>	Percent
Total	139		100
Employee Status			
Wage and salary workers	90		65
Self-employed	49		35
Sex			
Men	129		93
Women	10		7
Age			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	--		--
20 to 24 years	5		4
25 to 34 years	14		10
35 to 44 years	27		19
45 to 54 years	33		24
55 to 64 years	35		25
65 years and over	22		16
Race ¹			
White, non-Hispanic	116		83
Black, non-Hispanic	13		9
Hispanic or Latino	4		3
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 2011 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 2011

1 Occupation	Number	<u>Fatalities</u> Percent
Total	139	100
Management Occupations	26	19
Top Executives	4	3
Other management occupations	21	15
Farmers, Ranchers, and Other Agricultural Managers	16	12
Transportation and Material Moving Occupations	21	15
Air Transportation Workers	3	2
Motor vehicle operators	13	9
Material moving workers	4	3
Construction and Extraction Occupations	20	14
Supervisors of Construction and Extraction Workers	6	4
Construction Trades Workers	14	10
Installation, Maintenance, and Repair Occupations	12	9
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	4	3
Other Installation, Maintenance, and Repair Occupations	8	6
Sales and Related Occupations	12	9
Supervisors of Sales Workers	7	5
Farming, Fishing and Forestry Occupations	9	6
Agricultural Workers	5	4
Production Occupations	8	6
Protective Service Occupations	7	5
Law Enforcement Workers	6	4
Building and Grounds Cleaning and Maintenance Occupations	5	4
Business and Financial Operations Occupations	4	3
Arts, Design, Entertainment, Sports and Media Occupations	3	2
Occupation categories that did not meet publication criteria	12	9

¹ Based on the 2010 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 2011 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 2011

1 Industry	Fatalities	
	Number	Percent
Total	139	100
Private Industry	125	90
Government Workers	14	10
Agriculture, Forestry, Fishing and Hunting	25	18
Crop Production	12	9
Animal Production	8	6
Forestry and Logging	4	3
Construction	21	15
Construction of Buildings	5	4
Specialty Trade Contractors	13	9
Manufacturing	16	12
Fabricated Metal Product Manufacturing	3	2
Transportation Equipment Manufacturing	4	3
Transportation and Warehousing	10	8
Truck Transportation	8	6
Retail Trade	10	8
Motor Vehicle and Parts Dealers	3	2
Miscellaneous Store Retailers	3	2
Administrative and Support and Management Services	8	6
Administrative and Support Services	8	6
Services to Buildings and Dwellings	6	4
Landscaping Services	3	2
Educational Services	1	1
Other Services (except Public Administration)	7	5
Repair and Maintenance	7	5
Wholesale Trade	6	4
Merchant Wholesalers, Durable Goods	3	2
Merchant Wholesalers, Nondurable Goods	3	2
Health Care and Social Assistance	5	4
Arts, Entertainment and Recreation	5	4
Educational Services	1	1
Utilities	1	1

Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2011

¹ Industry	Fatalities	
	Number	Percent
Professional, Scientific and Technical Services	3	2
Accommodation and Food Services	3	2
Real Estate and Rental and Leasing	3	2

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 2011 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 2011**

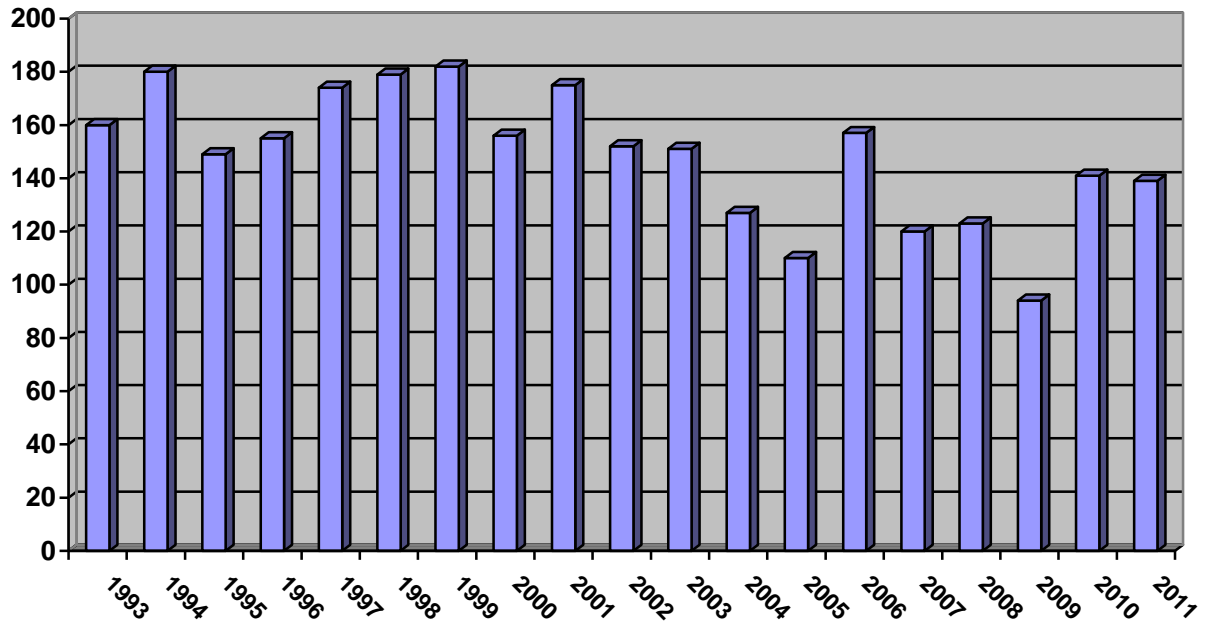
¹ Source of Injury	Number	Percent
Total	139	100
Vehicles	43	31
Aircraft	7	5
Highway vehicles, motorized	29	21
Off-road or industrial vehicles, powered	6	4
Persons, Plants, Animals and Minerals	41	29
Person-Injured or ill worker	16	12
Person-Other than injured or ill worker	15	11
Plants, trees, vegetation-not processed	7	5
Machinery	17	12
Agricultural and garden machinery	5	4
Construction, logging, and mining machinery	7	5
Material and personnel handling machinery	3	2
Structures and Surfaces	15	11
Confined spaces	3	2
Structures other than buildings	3	2
Other structural elements	3	2
Floors, walkways, ground surfaces	4	3
Tools, Instruments, and Equipment	9	6
Ladders	7	5
Parts and Materials	5	4
Machine, tool and electric parts	4	3
Chemicals and Chemical Products	4	3
Containers, Furniture and Fixtures	3	2
Containers	3	2
Source categories that did not meet publication criteria	2	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, or exposure that directly produced or inflicted the injury.

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 2011 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.