

**CENSUS OF FATAL OCCUPATIONAL
INJURIES
MICHIGAN 2010**

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TABLE OF CONTENTS

	<u>Page</u>
Preface	3
Introduction	4
Observation Summary	5
Technical Notes	13

LIST OF TABLES

1. Number and Percent Distribution of Fatal Occupational Injuries by Event or Exposure, Michigan 2010	6
2. Number and Percent Distribution of Fatal Occupational Injuries by Selected Characteristics, Michigan 2010	7
3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2010	8
4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2010	9
5. Number and Percent Distribution of Fatal Occupational Injuries by Source of Injury, Michigan 2010	11

LIST OF CHARTS

1. Historical CFOI Data, Michigan 1992-2010	12
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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, 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 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 141 occupational fatalities reported to the Michigan Census of Fatal Occupational Injuries (CFOI) program during the year 2010. Various categories related to these fatalities are summarized below.

- Transportation accidents led all other fatal events and accounted for 42 (30 percent) of the 141 fatal occupational injuries in 2010. This was followed by Assaults and violent acts with 35 fatalities (25 percent). (Table 1)
- Forty-five 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)
- Eighty-two percent of fatalities occurred to persons in the ethnicity category White, non-Hispanic. (Table 2)
- Occupations with the largest number of worker fatalities were Transportation and Material Moving with 31, followed by Management occupations with 26. (Table 3)
- Industries with the largest number of Michigan fatal work injuries during 2010 were Agriculture, Forestry, Fishing and Hunting reporting 24 and Construction reporting 21. (Table 4)
- Vehicles were identified as the greatest source of injury with 46 reported during 2010. This was followed by Other with 33 and Structures and surfaces with 30. (Table 5)
- Multiple traumatic injuries and Other traumatic injuries were the leading types of injuries during 2010, reporting 40 and 37 respectively.
- The Parts of body reported as most affected in the census was Multiple reported 55 cases and Head was reported in 30 of the cases.
- In the category of Worker Activity, Vehicular and transportation operations was reported in 43 fatalities and Construction, repairing and cleaning was reported in 33 cases.
- Street and highway was reported as the location of the fatality in 33 cases and Other or not reported was reported in 24 cases.

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan 2010**

Event or Exposure ¹	<u>Fatalities</u>	
	Number	Percent
Total	141	100
Transportation accidents	42	30
Highway accident	20	14
Nonhighway accident, except rail, air, water	7	5
Pedestrian, nonpassenger struck by vehicle, mobile equipment	9	6
Assaults and violent acts	35	25
Assaults and violent acts by person(s)	24	17
Self-inflicted injury	10	7
Contact with objects and equipment	22	16
Struck by object or equipment	14	10
Caught in or compressed by equipment or objects	3	2
Caught in or crushed in collapsing materials	4	3
Falls	22	16
Fall to lower level	18	13
Fall on same level	3	2
Exposure to harmful substances or environments	17	12
Contact with electric current	7	5
Exposure to caustic, noxious, or allergenic substances	8	6
Event categories that did not meet publication criteria	3	1

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 2010 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 2010

Worker Characteristics	Number	<u>Fatalities</u>	Percent
Total	141		100
Employee Status			
Wage and salary workers	97		69
Self-employed	44		31
Sex			
Men	129		91
Women	12		9
Age			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	--		--
20 to 24 years	3		2
25 to 34 years	20		14
35 to 44 years	23		16
45 to 54 years	40		28
55 to 64 years	30		21
65 years and over	21		15
Race ¹			
White, non-Hispanic	115		82
Black, non-Hispanic	15		11
Hispanic or Latino	10		7
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 2010 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 2010

¹ Occupation	Number	<u>Fatalities</u> Percent
Total	141	100
Transportation and material moving occupations	31	22
Motor vehicle operators	19	13
Material moving workers	5	4
Management occupations	26	18
Other management occupations	22	16
Construction and extraction occupations	18	13
Construction trades workers	16	11
Sales and related occupations	12	9
Supervisors, sales workers	8	6
Retail sales workers	4	3
Installation, maintenance, and repair occupations	12	9
Vehicle and mobile equipment mechanics, installers, and repairers	5	4
Other installation, maintenance, and repair occupations	7	5
Farming, fishing and forestry occupations	10	7
Agricultural workers	8	6
Building and grounds cleaning and maintenance occupations	7	5
Grounds maintenance workers	5	4
Protective service occupations	7	5
Law enforcement workers	4	3
Production occupations	5	4
Office and administrative support occupations	5	4
Personal care and service occupations	3	2
Occupational categories that did not meet publication criteria	5	2

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 2010 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 2010

1 Industry	Number	<u>Fatalities</u> Percent
Total	141	100
Private Industry	88	62
Agriculture, Forestry, Fishing & Hunting	24	17
Crop Production	15	11
Animal Production	6	4
Construction	21	15
Construction of Buildings	6	4
Heavy and Civil Engineering	4	3
Specialty Trade Contractors	11	8
Transportation and Warehousing	20	14
Retail Trade	14	10
Food and Beverage Stores	3	2
Gasoline Stations	4	3
General Merchandise Stores	3	2
Other Services, except Public Administration	14	10
Repair and Maintenance	8	6
Religious, Grantmaking, Civic, Professional, and Similar Organizations	4	3
Administrative and Support and Waste Management and Remediation Services	10	7
Administrative and Support Services	7	5
Waste Management and Remediation Services	3	2
Health Care and Social Assistance	6	4
Manufacturing	5	4
Wholesale Trade	5	4
Merchant Wholesalers, Durable Goods	3	2
Public Administration	5	4

Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2010
(Continued)

¹ Industry	Number	<u>Fatalities</u>	Percent
Professional, Scientific, and Technical Services	4		3
Arts, Entertainment, and Recreation	4		3
Accommodation and Food Services	3		2
Industry categories that did not meet publication criteria	6		3

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 2010 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 2010**

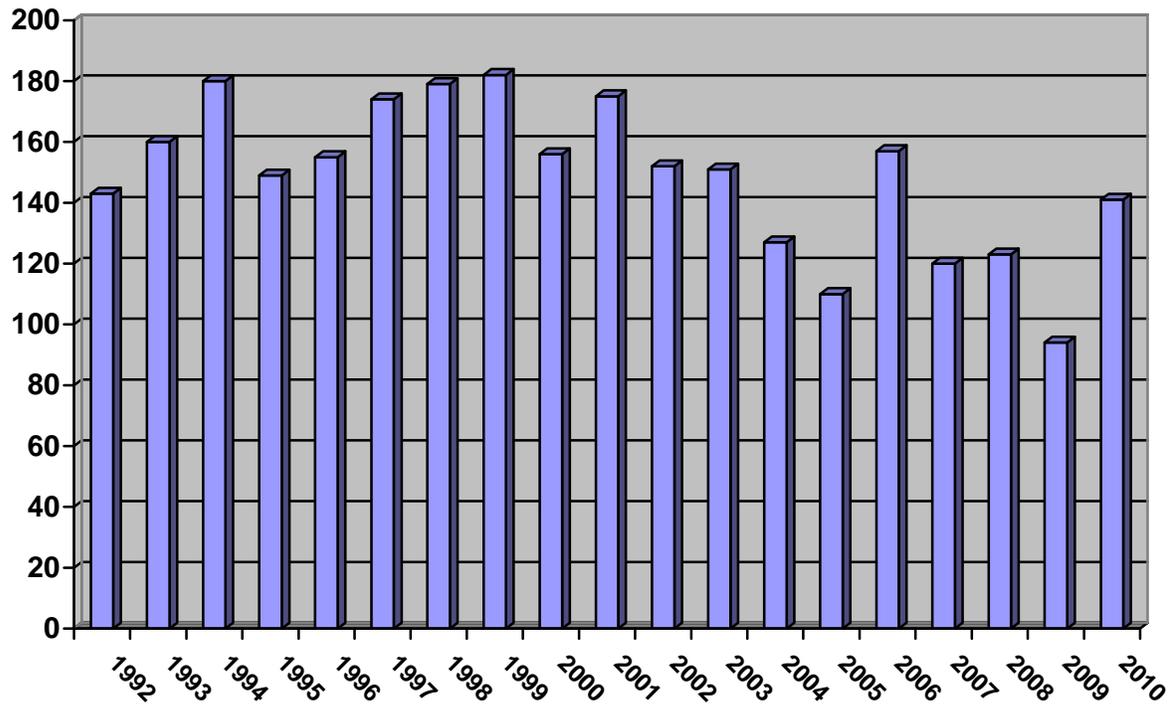
¹ Source of Injury	Number	Percent
Total	141	100
Vehicles	46	33
Highway vehicle, motorized	30	21
Plant and industrial powered vehicles, tractors	10	7
Other Sources	33	23
Ammunition	30	21
Structures and Surfaces	30	21
Floors, walkways, ground surfaces	24	17
Machinery	10	7
Agricultural and garden machinery	6	24
Construction, logging, and mining machinery	3	--
Chemicals and Chemical Products	8	6
Chemical products-general	4	--
Other chemicals	4	--
Parts and Materials	7	5
Machine, tool and electric parts	4	3
Persons, Plants, Animals and Minerals	5	4
Plants, trees, vegetation-not processed	4	3
Source categories that did not meet publication criteria	2	1

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 2010 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

Historical CFOI Data Michigan 1992-2010



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.

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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.