

**CENSUS OF FATAL OCCUPATIONAL
INJURIES
MICHIGAN 2021**

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Department of Licensing and Regulatory Affairs
January 2021

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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 140 occupational fatalities reported to the Michigan CFOI Program during the year 2021. Various categories related to these fatalities are summarized below.

- Transportation incidents led all fatal events and accounted for 47 (34 percent) of the 140 fatal occupational injuries during 2021. This was followed by contact with objects and equipment with 23 fatalities (16 percent). (Table 1)
- Age groups Under 16 and 16 to 17 years reported no fatalities. 18 to 19 years through 65 years and over reported between 4 and 33 fatalities. The age group of 18-19 years reported the least amount of fatalities with 4. (Table 2)
- Based on gender, 91 percent of Michigan's fatally injured workers were men. (Table 2)
- 81 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 occupations with 35, Construction and extraction occupations with 27 and Management occupations reporting 17 fatalities. (Table 3)
- Industries reporting the largest number of Michigan fatal work injuries during 2021 were Construction with 29, Agriculture, forestry, fishing and hunting with 22, and Transportation and warehousing with 22 fatalities. (Table 4)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan 2021**

Event or Exposure ¹	Fatalities	
	Number	Percent
Total	140	100
Transportation incident	47	34
Pedestrian vehicular incident	12	9
Roadway incident involving motorized land vehicle	24	17
Non-roadway incident involving motorized land vehicle	7	5
Contact with objects and equipment	23	16
Struck by object or equipment	16	11
Caught in or compressed by equipment or objects	6	4
Violence and other injuries by persons or animals	17	12
Intentional injury by person	14	10
Animal and insect related incidents	3	2
Falls, slips, trips	23	16
Falls on same level	--	--
Fall to lower level	17	12
Exposure to harmful substances or environments	26	19
Exposure to electricity	6	4
Exposure to other harmful substances	18	13
Fires and explosions	4	3
Explosions	--	--
Event categories that did not meet publication criteria	--	--

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 2021 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 2021

Worker Characteristics	Fatalities	
	Number	Percent
Total	140	100
Employee Status		
Wage and salary workers	99	71
Self-employed	41	29
Sex		
Men	127	91
Women	13	9
Age		
Both sexes:		
Under 16 years	--	--
16 to 17 years	--	--
18 to 19 years	4	3
20 to 24 years	6	4
25 to 34 years	17	12
35 to 44 years	29	21
45 to 54 years	24	17
55 to 64 years	33	24
65 years and over	24	17
Race¹		
White (non-Hispanic)	113	81
Black or African American (non-Hispanic)	20	14
Hispanic or Latino	5	4
American Indian or Alaska Native (non-Hispanic)	--	--
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 2021 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 2021

Occupation ¹	Number	<u>Fatalities</u> Percent
Total	140	100
Transportation and material moving occupations	35	25
Air transportation workers	4	3
Motor vehicle operators	27	10
Material moving workers	4	3
Construction and extraction occupations	27	19
Supervisors of construction and extraction workers	4	3
Construction trades workers	21	15
Management Occupations	17	12
Other management occupations	17	12
Building and grounds cleaning and maintenance occupations	13	9
Grounds maintenance workers	7	5
Installation, maintenance, and repair occupations	11	8
Vehicle and mobile equipment mechanics, installers, and repairers	4	3
Production occupations	9	6
Supervisors of production workers	3	2
Other production occupations	3	2
Farming, fishing, and forestry occupations	8	6
Agricultural workers	8	6
Protective service occupations	6	4
Other protective service workers	5	4
Office and administrative support occupations	4	3
Information and record clerks	3	2
Arts, design, entertainment, sports, and media occupations	3	2
Business and financial operations occupations	1	1

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 2021 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 2021

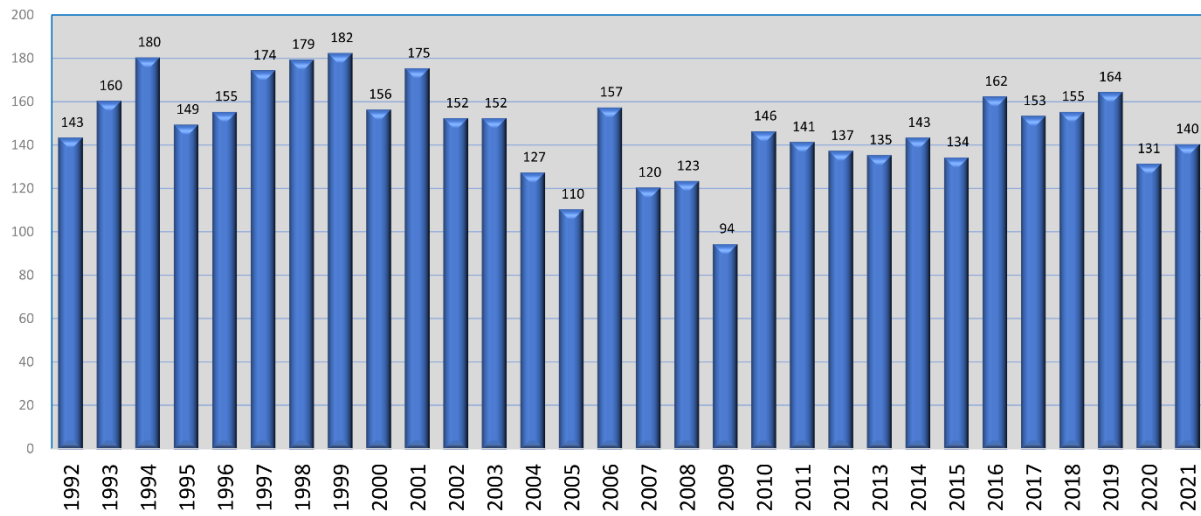
Industry ¹	Fatalities	
	Number	Percent
Total	140	100
Private Industry	133	95
Government Workers	7	5
Self-employed Workers	41	29
Agriculture, forestry, fishing and hunting	22	16
Crop production	12	9
Construction	29	21
Construction of buildings	4	3
Heavy and civil engineering construction	7	5
Specialty trade contractors	18	13
Manufacturing	14	10
Wood product manufacturing	1	1
Plastics and rubber products manufacturing	1	1
Transportation equipment manufacturing	4	3
Retail trade	5	4
Transportation and warehousing	22	16
Air transportation	4	3
Truck transportation	14	10
Transit and ground passenger transportation	2	1
Administrative and waste services	14	10
Educational services	3	2
Health care and social assistance	3	2
Other services, except public administration	9	6
Public administration	1	1

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 2021 are preliminary.

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

Michigan Historical CFOI Data 1992 through 2021



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.

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.