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# Fatal Work Injuries in Michigan — 2018

Fatal work injuries totaled 155 in 2018 for Michigan, the U.S. Bureau of Labor Statistics reported today. Assistant Commissioner for Regional Operations Charlene Peiffer noted that the number of work-related fatalities in Michigan was up by two from the previous year. Fatal occupational injuries in the state have ranged from a high of 182 in 1999 to a low of 94 in 2009. (See chart 1.)

Nationwide, a total of 5,250 fatal work injuries were recorded in 2018, up from the 5,147 fatal injuries in 2017, according to the results from the Census of Fatal Occupational Injuries (CFOI) program.



Chart 1. Total fatal occupational injuries, Michigan, 2009–2018

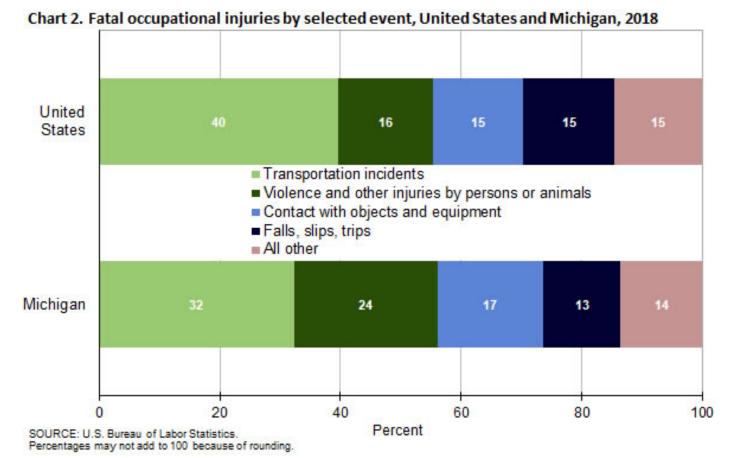
SOURCE: U.S. Bureau of Labor Statistics.

## Type of incident

In Michigan, transportation incidents resulted in 50 fatal work injuries, and violence and other injuries by persons or animals accounted for 37 fatalities. These two major categories accounted for 56 percent of all workplace fatalities in the state. (See table 1.) Worker deaths from transportation incidents were up from 43 over the year, and worker fatalities due to violence or other injuries by persons or animals were down from 41.

Contact with objects or equipment was the third-most frequent fatal work event with 27 fatalities, up from 23 in the prior year. Falls, slips, or trips resulted in 20 work-related deaths compared to 27 in 2017.

Nationally, transportation incidents were the most frequent fatal workplace event in 2018, accounting for 40 percent of fatal work injuries. (See chart 2.) Violence and other injuries by persons or animals was the second-most common fatal event (16 percent), followed by falls, slips, and trips (15 percent) and contact with objects and equipment (15 percent).



## **Industry**

The private agriculture, forestry, fishing, and hunting industry had the highest number of fatalities in Michigan with 24, up from 22 in the previous year. (See table 2.) Transportation incidents resulted in 10 of the 24 fatalities in the industry. The crop production sector accounted for 15 of the 24 workplace fatalities in the private agriculture, forestry, fishing, and hunting industry.

The private construction industry had 23 workplace fatalities, down from 31 in the previous year. The specialty trade contractors sector accounted for 12, or 52 percent, of the fatal injuries in this industry.

## Occupation

The transportation and material moving occupational group had the highest number of workplace fatalities with 32. (See table 3.) Heavy and tractor-trailer truck drivers accounted for 14 of the 32 fatalities among transportation and material moving workers. The construction and extraction occupational group had the second-highest number of workplace fatalities with 24, followed by management occupations with 22. Construction trades workers suffered 13 of the work-related deaths within the construction and extraction group. Farmers, ranchers, and other agricultural managers accounted for 13 of the 22 management occupational fatalities.

## **Additional highlights**

- Men accounted for 91 percent of the work-related fatalities in Michigan, similar to the national share. (See table 4.) Transportation incidents made up 32 percent of the fatalities for men in Michigan.
- White non-Hispanics accounted for 83 percent of those who died from a workplace injury. Nationwide, this group accounted for 65 percent of work-related deaths.
- Workers 25-54 years old accounted for 52 percent of the state's work-related fatalities in 2018, compared to 58 percent of on-the-job fatalities nationally.
- Of the 155 fatal work injuries in Michigan, 71 percent worked for wages and salaries; the remainder were self-employed. The most frequent fatal event for wage and salary workers was transportation incidents; violence and other injuries by persons or animals was the most frequent fatal event for self-employed workers.

### **Technical Note**

**Background of the program.** The Census of Fatal Occupational Injuries (CFOI), part of the Bureau of Labor Statistics (BLS) Occupational Safety and Health Statistics (OSHS) program, is a count of all fatal work injuries occurring in the U.S. during the calendar year. The CFOI uses a variety of state, federal, and independent data sources to identify, verify, and describe fatal work injuries. This ensures counts are as complete and accurate as possible. For the 2018 national data, over 24,800 unique source documents were reviewed as part of the data collection process. For technical information and definitions for the CFOI, see the BLS Handbook of Methods on the BLS website at www.bls.gov/opub/hom/cfoi/home.htm.

**Federal/State agency coverage.** The CFOI includes data for all fatal work injuries, some of which may be outside the scope of other agencies or regulatory coverage. Comparisons between CFOI counts and those released by other agencies should account for the different coverage requirements and definitions used by each agency. For more information on the scope of CFOI, see <a href="https://www.bls.gov/iif/cfoiscope.htm">www.bls.gov/opub/hom/cfoi/concepts.htm</a>.

Acknowledgments. BLS thanks the Michigan Department of Licensing and Regulatory Affairs for their efforts in collecting accurate, comprehensive, and useful data on fatal work injuries. BLS also appreciates the efforts of all federal, state, local, and private sector entities that provided 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 Office of Workers' Compensation Programs (Federal Employees' Compensation and Longshore and Harbor Workers' Compensation divisions); the Federal Railroad Administration; the National Highway Traffic Safety Administration; state vital statistics registrars, coroners, and medical examiners; state departments of health, labor, and industrial relations and workers' compensation agencies; state and local police departments; and state farm bureaus.

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Fatal occupational injuries by event or exposure, Michigan, 2017–18

Eventir Carposure	Tubio in future occupational injurios by event of exposure, internguin, 2017-10	2017	20	18
Volence and other injuries by persons or animals	Event or exposure (1)	Number	Number	Percent
Intertional injury by person Intertional injury by other person—Intertional Shooting by other person—Intertional Shooting by other person—Intertional Shooting by other person—Intertional Shooting by other person—Intertional Shooting—Intertional self-in Intertional Self-inflicted injury—intertional Self-inflicted injury—intertional Shooting—Intertional self-harm Shooting	Total	153	155	100
Intentional Injury by other person   25   22   14	Violence and other injuries by persons or animals	41	37	24
Shocking by other personintentional   22   18   12   12   13   12   13   12   14   13   12   14   14   14   15   14   18   15   14   18   15   14   18   15   14   18   15   15   14   18   15   15   14   18   15   15   14   18   15   15   14   18   15   15   14   18   15   15   14   18   15   15   14   18   15   15   14   18   15   15   15   14   18   15   15   15   15   16   14   18   15   15   15   15   15   16   18   15   15   15   16   18   15   15   15   15   15   15   15	Intentional injury by person	40	36	23
Stabbing_cutting_stabning_piercing	Intentional injury by other person	25	22	14
Hitting, Micking, Dealing, shoving.	Shooting by other personintentional	22	18	12
Saf-inflicted (njuryinentonal   15	Stabbing, cutting, slashing, piercing	1	3	2
Shoolingintentional self-harm	Hitting, kicking, beating, shoving		1	1
Hanging, strangulation, asphyxiation—intentional self-harm	Self-inflicted injuryintentional	15	14	9
Transportation incidents	Shootingintentional self-harm	5	6	4
Transportation incidents	•	1 1	7	5
Aircraft crash during takeoff or landing	Transportation incidents	43	50	32
Aircraft crash during takeoff or landing—due to mechanical failure  Aircraft crash during takeoff or landing—into structure, object, or ground  Other in-flight crash into structure, object, or ground  Pedestrian eviblicular incident  Pedestrian struck by vehicle in work zone  1 1 5 3 3 Petestrian struck by vehicle in work zone  1 1 4 3 3 Petestrian struck by vehicle in work zone  1 1 4 3 3 Petestrian struck by vehicle in roadway  Pedestrian struck by vehicle in roadway  Pedestrian struck by vehicle on side of road  Pedestrian struck by vehicle on side of road  1 2 1 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1 1		l I	3	2
Aircraft crash during takeoff or landing—due to mechanical failure  Aircraft crash during takeoff or landing—into structure, object, or ground  Other in-flight crash into structure, object, or ground  Pedestrian eviblicular incident  Pedestrian struck by vehicle in work zone  1 1 5 3 3 Petestrian struck by vehicle in work zone  1 1 4 3 3 Petestrian struck by vehicle in work zone  1 1 4 3 3 Petestrian struck by vehicle in roadway  Pedestrian struck by vehicle in roadway  Pedestrian struck by vehicle on side of road  Pedestrian struck by vehicle on side of road  1 2 1 1 2 1 1 2 1 1 2 1 1 1 1 1 1 1 1	Aircraft crash during takeoff or landing		2	1
Aircraft crash during takeoff or landing—into structure, object, or ground	· · · · · · · · · · · · · · · · · · ·	1 1	1	1
Other in-flight crash.         -         1         3         3         2         2         1         1         4         3         3         3         2         2         1         1         4         3         3         3         2         2         1		I I	1	1
Detail			1	1
Pedestrian various by vehicle in work zone			1	1
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Pedestrian struck by forward-moving vehicle in work zone         1         4         3           Pedestrian struck by vehicle backing up in work zone         -         1         1           Pedestrian struck by vehicle in roadway         -         7         5           Pedestrian struck by vehicle on side of road.         1         2         1           Pedestrian struck by vehicle propelled by another vehicle on side of road.         -         1				
Pedestrian struck by vehicle backing up in work zone	·	l I	4	
Pedestrian struck by vehicle in roadway         -         7         5           Pedestrian struck by forward-moving vehicle in roadway         -         7         5           Pedestrian struck by forward-moving vehicle on side of road         1         2         1           Pedestrian struck by vehicle propelled by another vehicle on side of road         -         1         1         1           Pedestrian struck by forward-moving vehicle in nonroadway area         2         3         2           Pedestrian struck by forward-moving vehicle in nonroadway area         2         1         1         1           Redestrian struck by forward-moving vehicle in nonroadway area         2         1         1         1           Redestrian struck by forward-moving wehicle in nonroadway area         2         1         1         1           Readway collision with other vehicle.         27         23         15         15         1         2         1         1         1         1         1         1         1         2         1         1         1         2         1         3         2         1         1         1         2         3         3         2         2         1         3         2         1         3         2 <t< td=""><td></td><td>I I</td><td>1</td><td>1</td></t<>		I I	1	1
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Pedestrian struck by forward-moving vehicle on side of road		I I	1	1
Pedestrian struck by vehicle in nonroadway area         2         3         2           Pedestrian struck by forward-moving vehicle in nonroadway area         2         1         1           Roadway incidents involving motorized land vehicle         27         23         15           Roadway collision-moving in same direction         2         5         3           Roadway collision-moving in same direction, oncoming         5         3         2           Roadway collision-moving perpendicularly         7         9         6           Roadway collision-moving and standing vehicle in roadway         3         3         2           Roadway collision with object other than vehicle         8         3         2           Vehicle struck object or animal on side of roadway         8         3         2           Vehicle struck object or animal on side of roadway         8         3         2           Nonroadway collision with other vehicle         -         2         1           Collision between a moving and standing vehicle, nonroadway         -         2         1           Nonroadway collision with other vehicle         -         1         1           Nonroadway collision with other vehicle         -         1         1           Nonroadway collision with other		I I	<u>'</u>	1
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Fall on same level due to slipping       -       3       2         Falls to lower level       20       13       8         Other fall to lower level       15       10       6         Other fall to lower level less than 6 feet       3       1       1         Other fall to lower level 6 to 10 feet       -       4       3         Other fall to lower level 11 to 15 feet       3       3       2         Exposure to harmful substances or environments       11       17       11		27	20	13
Falls to lower level       20       13       8         Other fall to lower level       15       10       6         Other fall to lower level less than 6 feet       3       1       1         Other fall to lower level 6 to 10 feet        4       3         Other fall to lower level 11 to 15 feet       3       3       2         Exposure to harmful substances or environments       11       17       11	Falls on same level	3	7	5
Other fall to lower level       15       10       6         Other fall to lower level less than 6 feet       3       1       1         Other fall to lower level 6 to 10 feet        4       3         Other fall to lower level 11 to 15 feet       3       3       2         Exposure to harmful substances or environments       11       17       11	Fall on same level due to slipping		3	2
Other fall to lower level less than 6 feet       3       1       1         Other fall to lower level 6 to 10 feet        4       3         Other fall to lower level 11 to 15 feet       3       3       2         Exposure to harmful substances or environments       11       17       11	Falls to lower level	20	13	8
Other fall to lower level 6 to 10 feet        4       3         Other fall to lower level 11 to 15 feet       3       3       2         Exposure to harmful substances or environments       11       17       11	Other fall to lower level	15	10	6
Other fall to lower level 11 to 15 feet       3       3       2         Exposure to harmful substances or environments       11       17       11		3	1	1
Exposure to harmful substances or environments	Other fall to lower level 6 to 10 feet		4	3
	Other fall to lower level 11 to 15 feet	3	3	2
Exposure to electricity         5         5         3	Exposure to harmful substances or environments	11	17	11
	Exposure to electricity	5	5	3

Table 1. Fatal occupational injuries by event or exposure, Michigan, 2017-18 - Continued

Event or exposure (1)	2017	20	18
	Number	Number	Percent
Indirect exposure to electricity	1	3	2
Indirect exposure to electricity, greater than 220 volts	1	3	2
Exposure to other harmful substances	4	10	6
Nonmedical use of drugs or alcoholunintentional overdose	4	8	5
Exposure to oxygen deficiency, n.e.c.	2	2	1
Drowning, submersion, n.e.c.	2	1	1
Depletion of oxygen		1	1
Contact with objects and equipment	23	27	17
Struck by object or equipment	17	22	14
Struck by powered vehiclenontransport	8	10	6
Caught between rolling powered vehicle and other object		1	1
Struck by other falling powered vehicle	4	3	2
Struck by falling object or equipmentother than powered vehicle	6	9	6
Struck by discharged or flying object	1	3	2
Struck by dislodged flying object, particle	1	3	2
Struck, caught, or crushed in collapsing structure, equipment, or material	3	3	2
Excavation or trenching cave-in	1	1	1
Engulfment in other collapsing material	1	1	1
Overexertion and bodily reaction	1		

### Footnotes:

<sup>(1)</sup> Based on the BLS Occupational Injury and Illness Classification System (OIICS) 2.01 implemented for 2011 data forward.

NOTE: Data for all years are final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. CFOI fatality counts exclude illness-related deaths unless precipitated by an injury event. Dashes indicate no data reported or data that do not meet publication criteria.

Table 2. Fatal occupational injuries by industry, Michigan, 2017–18

Industry (1)	2017	20	
	Number	Number	Percent
Total	153	155	100
Private industry	141	146	94
Goods producing	65	68	44
Natural resources and mining	22	26	17
Agriculture, forestry, fishing and hunting	22	24	15
Crop production	16	15	10
Oilseed and grain farming	4	8	5
Soybean farming		1	1
Corn farming	4	5	3
Other crop farming	1		
All other crop farming		1	1
Animal production and aquaculture	5	6	4
Cattle ranching and farming	4	5	3
Beef cattle ranching and farming, including feedlots		1	1
Beef cattle ranching and farming		1	1
Dairy cattle and milk production	2	4	3
Poultry and egg production	1	1	1
Chicken egg production	1	1	1
Support activities for agriculture and forestry	1	1	1
Support activities for crop production		1	1
Support activities for crop production		1	1
Soil preparation, planting, and cultivating		1	1
Mining (2)		2	1
Mining (except oil and gas)		2	1
Nonmetallic mineral mining and quarrying		2	1
Stone mining and quarrying		2	1
Crushed and broken limestone mining and quarrying		2	1
Construction	31	23	15
Construction	31	23	15
Construction of buildings	7	6	4
Residential building construction	7	3	2
Residential building construction	7	3	2
Residential remodelers	6	3	2
Nonresidential building construction		2	1
Commercial and institutional building construction		2	. 1
Heavy and civil engineering construction	4	5	3
Utility system construction			1
Water and sewer line and related structures construction		'	1
	' '	'	3
Highway, street, and bridge construction			3
Highway, street, and bridge construction	22	12	8
Specialty trade contractors.		12	
Foundation, structure, and building exterior contractors	8	3	2
Building equipment contractors	6	4	3
Electrical contractors	5	2	1
Nonresidential electrical contractors	3	1 5	1
Other specialty trade contractors	4	) 3	3
Site preparation contractors	3	4	3
All other specialty trade contractors	1	1	1
Manufacturing	12	19	12
Manufacturing	12	19	12
Wood product manufacturing	1	1	1
Sawmills and wood preservation		1	1
Sawmills and wood preservation		1	1
Sawmills		1	1
Chemical manufacturing		2	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing		1	1

Table 2. Fatal occupational injuries by industry, Michigan, 2017–18 - Continued

Industry (1)	2017	20	18
	Number	Number	Percent
Resin and synthetic rubber manufacturing		1	•
Plastics material and resin manufacturing		1	•
Paint, coating, and adhesive manufacturing		1	•
Adhesive manufacturing		1	•
Fabricated metal product manufacturing	4	3	2
Architectural and structural metals manufacturing	2	1	
Plate work and fabricated structural product manufacturing	1	1	
Fabricated structural metal manufacturing		1	
Machine shops; turned product; and screw, nut, and bolt manufacturing		1	
Turned product and screw, nut, and bolt manufacturing		1	
Machinery manufacturing		5	:
Industrial machinery manufacturing		1	
Industrial machinery manufacturing		1	
Sawmill, woodworking, and paper machinery manufacturing		1	
Metalworking machinery manufacturing		3	
Metalworking machinery manufacturing		3	
Special die and tool, die set, jig, and fixture manufacturing			•
Other general purpose machinery manufacturing		'	
		'	
Material handling equipment manufacturing			
Conveyor and conveying equipment manufacturing		1	
Transportation equipment manufacturing		6	4
Motor vehicle parts manufacturing		5	;
Motor vehicle steering and suspension components (except spring) manufacturing		1	
Motor vehicle metal stamping		1	•
ervice providing		78	50
Trade, transportation, and utilities		38	25
Utilities		3	2
Utilities		3	2
Electric power generation, transmission and distribution		3	2
Electric power generation		2	•
Fossil fuel electric power generation		1	
Electric power transmission, control, and distribution		1	
Electric power distribution		1	
Wholesale trade	6	5	;
Merchant wholesalers, durable goods		3	
Motor vehicle and motor vehicle parts and supplies merchant wholesalers		2	
Motor vehicle supplies and new parts merchant wholesalers		1	
Tire and tube merchant wholesalers	1	1	
Miscellaneous durable goods merchant wholesalers		1	
Merchant wholesalers, nondurable goods	4	2	
Grocery and related product wholesalers		1	
Fresh fruit and vegetable merchant wholesalers			
Farm product raw material merchant wholesalers		'	
Livestock merchant wholesalers		'	
Retail trade		14	
		'-	
Motor vehicle and parts dealers		ا م	,
Automotive parts, accessories, and tire stores			
Automotive parts and accessories stores		1	
Food and beverage stores			-
Grocery stores		-	-
Convenience stores.		1	
Sporting goods, hobby, book, and music stores		1	
Sporting goods, hobby, and musical instrument stores		1	
Sewing, needlework, and piece goods stores		1	
General merchandise stores		2	•
Department stores		1	•

Table 2. Fatal occupational injuries by industry, Michigan, 2017–18 - Continued

to destruction (1)	2017	20	18
Industry (1)	Number	Number	Percent
Department stores		1	1
Other general merchandise stores		1	1
Transportation and warehousing	10	16	10
Air transportation	1	1	1
Nonscheduled air transportation		1	1
Nonscheduled air transportation		1	1
Truck transportation	5	9	6
General freight trucking	4	6	4
General freight trucking, long-distance	1	4	3
General freight trucking, long-distance, truckload	1	3	2
Specialized freight trucking		3	2
Specialized freight (except used goods) trucking, local		2	1
Specialized freight (except used goods) trucking, long-distance		1	1
Transit and ground passenger transportation	1	2	1
Taxi and limousine service	1	2	1
Taxi service		2	1
Support activities for transportation	2	3	2
Support activities for road transportation	2	3	2
Motor vehicle towing	2	3	2
Information			
Financial activities	1	4	3
Real estate and rental and leasing		4	3
Real estate		4	3
Activities related to real estate		1	1
Offices of real estate appraisers		1	1
Professional and business services	12	13	8
Professional and technical services	2	3	2
Professional, scientific, and technical services	2	3	2
Accounting, tax preparation, bookkeeping, and payroll services		1	1
Accounting, tax preparation, bookkeeping, and payroll services		1	1
Advertising and related services	1	1	1
Direct mail advertising		1	1
Other professional, scientific, and technical services		1	1
Photographic services		1	. 1
Commercial photography		1	. 1
Administrative and waste services	10	10	6
Administrative and support services	7	8	5
Business support services		1	1
Other business support services		1	1
Repossession services		1	1
Investigation and security services		2	1
Investigation, guard, and armored car services		1	1
Security guards and patrol services		, i	1
		'	1
Security systems services		'	1
	7	<u>'</u>	1
Services to buildings and dwellings		3	3
Landscaping services	0	4	3
Educational and health services.	5	2	1
Educational services		1	1
Educational services		1	1
Elementary and secondary schools		1	1
Elementary and secondary schools	<u></u>	1	1
Health care and social assistance	5	1	1
Ambulatory health care services	2	1	1
Outpatient care centers		1	1
Other outpatient care centers		1	1

Table 2. Fatal occupational injuries by industry, Michigan, 2017–18 - Continued

Leisure and hospitality	In director (1)	2017 2018		
Arts, entertainment, and recreation	Industry (1)	Number	Number	Percent
Performing arts, spectator sports, and related industries.         5         3         2           Performing arts companies.         -         1         1           Musical groups and artists.         -         1         1           Spectator sports.         2         2         2         1           Spectator sports.         2         2         2         1           Accommodation and food services         7         8         5           Accommodation.         1         3         2           Traveler accommodation.         -         1         1         1           Casino hotels.         -         1	Leisure and hospitality	18	11	7
Performing arts companies	Arts, entertainment, and recreation	11	3	2
Musical groups and artists       —       1       1         Spectator sports       2       2       1         Spectator sports       2       2       2       1         Accommodation and food services       7       8       5         Accommodation       1       3       2         Traveler accommodation       -       1       1         Casino hotels       -       1       1         Food services and drinking places       6       5       3         Drinking places (alcoholic beverages)       2       1       1         Drinking places (alcoholic beverages)       2       1       1         Drinking places (alcoholic beverages)       2       1       1         Mestaurants and other eating places       4       4       3         Restaurants and other eating places       4       4       3         Full-service restaurants       2       1       1       1         Other services, except public administration       10       10       6         Other services, except public administration       10       10       6         Other services, except public administration       10       10       6         Repair	Performing arts, spectator sports, and related industries	5	3	2
Spectator sports         2         2         1           Accommodation and food services         7         8         5           Accommodation         1         3         2           Traveler accommodation         1         1         3         2           Traveler accommodation         -         1 <td>Performing arts companies</td> <td> </td> <td>1</td> <td>1</td>	Performing arts companies		1	1
Spectator sports         2         2         1           Accommodation and food services         7         8         5           Accommodation         1         3         2           Traveler accommodation         -         1         1         1           Casino hotels         -         1         1         1         1           Food services and drinking places         6         5         3         Drinking places (alcoholic beverages)         2         1 </td <td>Musical groups and artists</td> <td> </td> <td>1</td> <td>1</td>	Musical groups and artists		1	1
Accommodation and food services         7         8         5           Accommodation         1         3         2           Traveler accommodation         -         1         1         1           Casino hotels         -         1         1         1           Food services and drinking places         6         5         3           Drinking places (alcoholic beverages)         2         1         1           Drinking places (alcoholic beverages)         2         1         1           Restaurants and other eating places         4         4         3           Chill-service restaurants         2         4         4         3           Other services, except public administration         10         10         6         6         6         5         3           Automotive repair and maintenance         9         6         4         4         3	Spectator sports	2	2	1
Accommodation	Spectator sports	2	2	1
Traveler accommodation         -         1         1           Casino hotels         -         1         1           Food services and drinking places         6         5         3           Drinking places (alcoholic beverages)         2         1         1           Drinking places (alcoholic beverages)         2         1         1           Restaurants and other eating places         4         4         3           Restaurants and other eating places         4         4         3           Full-service restaurants         2         4         4         3           Other services, except public administration         10         10         6           Automotive repair and maintenance         6         6         5         3         2           Automotive	Accommodation and food services	7	8	5
Casino hotels       -       1       1         Food services and drinking places       6       5       3         Drinking places (alcoholic beverages)       2       1       1         Drinking places (alcoholic beverages)       2       1       1         Restaurants and other eating places       4       4       3         Restaurants and other eating places       4       4       3         Full-service restaurants       2       4       3         Full-service restaurants       2       4       3         Other services, except public administration       10       10       6         Other services, except public administration       10       10       6         Repair and maintenance       9       6       4         Automotive repair and maintenance       6       5       3         Automotive repair and maintenance       6       5       3         General automotive repair and maintenance       7       1       1         Car washes       -       1       1       1         Commercial machinery repair and maintenance       1       1       1       1         Commercial machinery repair and maintenance       1       1	Accommodation	1	3	2
Food services and drinking places   5   3	Traveler accommodation		1	1
Drinking places (alcoholic beverages)         2         1         1           Drinking places (alcoholic beverages)         2         1         1           Restaurants and other eating places         4         4         4           Restaurants and other eating places         4         4         3           Full-service restaurants         2         4         3           Other services, except public administration         10         10         6           Repair and maintenance         9         6         4         3           Automotive repair and maintenance         6         4         3           General automotive repair and maintenance         -         1         1         1           Car washes         -         -         1         1         1         1         1         1         1         1         1         1         1	Casino hotels		1	1
Drinking places (alcoholic beverages)         2         1         1           Restaurants and other eating places         4         4         4         3           Restaurants and other eating places         4         4         4         3           Full-service restaurants         2         4         3           Other services, except public administration         10         10         6           Other services, except public administration         10         10         6           Repair and maintenance         9         6         4           Automotive repair and maintenance         6         4         3           Automotive mechanical and electrical repair and maintenance         6         4         3           General automotive repair         5         3         2           Other automotive repair and maintenance         -         1         1           Car washes         -         1         1         1           Commercial machinery repair and maintenance         1         1         1         1           Commercial machinery repair and maintenance         1         1         1         1         1         1         1         1         1         1         1         1	Food services and drinking places	6	5	3
Restaurants and other eating places	Drinking places (alcoholic beverages)	2	1	1
Restaurants and other eating places.       4       4       3         Full-service restaurants       2       4       3         Other services, except public administration.       10       10       6         Other services, except public administration.       10       10       6         Other services, except public administration.       9       6       4         Repair and maintenance.       9       6       4         Automotive repair and maintenance.       6       5       3         Automotive mechanical and electrical repair and maintenance.       6       4       3         General automotive repair and maintenance.       5       3       2         Other automotive repair and maintenance.       -       1       1         Car washes       -       1       1       1         Commercial machinery repair and maintenance.       1       1       1       1         Commercial machinery repair and maintenance.       1	Drinking places (alcoholic beverages)	2	1	1
Restaurants and other eating places.       4       4       3         Full-service restaurants       2       4       3         Other services, except public administration.       10       10       6         Other services, except public administration.       10       10       6         Other services, except public administration.       9       6       4         Repair and maintenance.       9       6       4         Automotive repair and maintenance.       6       5       3         Automotive mechanical and electrical repair and maintenance.       6       4       3         General automotive repair and maintenance.       5       3       2         Other automotive repair and maintenance.       -       1       1         Car washes       -       1       1       1         Commercial machinery repair and maintenance.       1       1       1       1         Commercial machinery repair and maintenance.       1	Restaurants and other eating places	4	4	3
Other services, except public administration         10         10         6           Other services, except public administration         10         10         6           Repair and maintenance         9         6         4           Automotive repair and maintenance         6         5         3           Automotive mechanical and electrical repair and maintenance         6         4         3           General automotive repair         5         3         2           Other automotive repair and maintenance          1         1           Car washes          1         1         1           Commercial machinery repair and maintenance         1         1         1         1           Commercial machinery repair and maintenance         1		4	4	3
Other services, except public administration	Full-service restaurants	2	4	3
Other services, except public administration.         10         10         6           Repair and maintenance.         9         6         4           Automotive repair and maintenance.         6         5         3           Automotive repair and maintenance.         6         4         3           General automotive repair.         5         3         2           Other automotive repair and maintenance.         -         1         1         1           Car washes.         -         1	Other services, except public administration	10	10	6
Automotive repair and maintenance       6       5       3         Automotive mechanical and electrical repair and maintenance       6       4       3         General automotive repair       5       3       2         Other automotive repair and maintenance       -       1       1       1         Car washes       -       1       1       1       1         Commercial machinery repair and maintenance       1	·	10	10	6
Automotive mechanical and electrical repair and maintenance 6 4 3 General automotive repair 5 3 2 2 Other automotive repair and maintenance	Repair and maintenance	9	6	4
General automotive repair       5       3       2         Other automotive repair and maintenance        1       1         Car washes        1       1         Commercial machinery repair and maintenance       1       1       1         Commercial machinery repair and maintenance       1       1       1         Personal and laundry services        1       1         Personal care services        1       1         Hair, nail, and skin care services        1       1         Barber shops        1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Human rights organizations        1       1         Federal government       1       1       1       1         Federal government	Automotive repair and maintenance	6	5	3
Other automotive repair and maintenance       -       1       1         Car washes       -       1       1         Commercial machinery repair and maintenance       1       1       1         Commercial machinery repair and maintenance       1       1       1         Personal and laundry services       -       1       1       1         Personal care services       -       1       1       1         Hair, nail, and skin care services       -       1       1       1         Barber shops       -       1       1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations       -       1       1       1         Social advocacy organizations       -       1       1       1         Human rights organizations       -       1       1       1         Government (3)       12       9       6         Federal government       4       -       -	Automotive mechanical and electrical repair and maintenance	6	4	3
Car washes       -       1       1         Commercial machinery repair and maintenance       1       1       1         Commercial machinery repair and maintenance       1       1       1         Personal and laundry services        1       1         Personal care services        1       1         Hair, nail, and skin care services        1       1         Barber shops        1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       4	General automotive repair	5	3	2
Commercial machinery repair and maintenance       1       1       1         Commercial machinery repair and maintenance       1       1       1         Personal and laundry services        1       1         Personal care services        1       1         Hair, nail, and skin care services        1       1         Barber shops        1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4	Other automotive repair and maintenance		1	1
Commercial machinery repair and maintenance       1       1       1         Commercial machinery repair and maintenance       1       1       1         Personal and laundry services        1       1         Personal care services        1       1         Hair, nail, and skin care services        1       1         Barber shops        1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4	Car washes		1	1
Personal and laundry services       -       1       1         Personal care services       -       1       1         Hair, nail, and skin care services       -       1       1         Barber shops       -       1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations       -       1       1         Social advocacy organizations       -       1       1         Human rights organizations       -       1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4       -       -       -		1	1	1
Personal care services        1       1         Hair, nail, and skin care services        1       1         Barber shops        1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       1       1       1         State government       4	Commercial machinery repair and maintenance	1	1	1
Personal care services       -       1       1         Hair, nail, and skin care services       -       1       1         Barber shops       -       1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations       -       1       1         Social advocacy organizations       -       1       1         Human rights organizations       -       1       1         Government (3)       12       9       6         Federal government       1       1       1         State government       4       -       -	Personal and laundry services		1	1
Barber shops        1       1         Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)        1       1         Federal government       1       1       1         State government       4	·		1	1
Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1       1         Social advocacy organizations        1       1       1         Human rights organizations        1       1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4	Hair, nail, and skin care services		1	1
Religious, grantmaking, civic, professional, and similar organizations       1       3       2         Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1       1         Social advocacy organizations        1	Barber shops		1	1
Religious organizations       1       2       1         Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4	·	1	3	2
Religious organizations       1       2       1         Social advocacy organizations        1       1         Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4		1	2	1
Social advocacy organizations		1	2	1
Social advocacy organizations        1       1         Human rights organizations        1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4	· ·		1	1
Human rights organizations       -       1       1         Government (3)       12       9       6         Federal government       1       1       1       1         State government       4	·		1	1
Government (3)       12       9       6         Federal government       1       1       1       1       1       1       1       - <t< td=""><td></td><td>  </td><td>1</td><td>1</td></t<>			1	1
Federal government         1         1         1         1         1         1		12	9	6
State government			- 1	1
	· · · · · · · · · · · · · · · · · · ·			
Local government	Local government	7	6	4

### Footnotes:

NOTE: Data for all years are final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. CFOI fatality counts exclude illness-related deaths unless precipitated by an injury event. Dashes indicate no data reported or data that do not meet publication criteria.

<sup>(1)</sup> Industry data are based on the North American Industry Classification System, 2012.

<sup>(2)</sup> Includes fatal injuries at all establishments categorized as Mining, quarrying, and oil and gas extraction (Sector 21) in the North American Industry Classification System, 2012, including establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.

<sup>(3)</sup> Includes fatal injuries to workers employed by governmental organizations regardless of industry.

Table 3. Fatal occupational injuries by occupation, Michigan, 2017–18

Occupation (1)	2017	20	18
Occupation (1)	Number	Number	Percent
Total	153	155	100
Management occupations	22	22	14
Top executives	2	4	3
Chief executives	2	3	2
Chief executives	2	3	2
General and operations managers		1	1
General and operations managers		1	1
Operations specialties managers		1	1
Transportation, storage, and distribution managers		1	1
Transportation, storage, and distribution managers		1	1
Other management occupations	18	17	11
Farmers, ranchers, and other agricultural managers	. 15	13	8
Farmers, ranchers, and other agricultural managers	1	13	8
Food service managers		1	1
Food service managers		1	1
Business and financial operations occupations			
Financial specialists		1	1
Appraisers and assessors of real estate		1	1
Appraisers and assessors of real estate		1	1
Computer and mathematical occupations			
Architecture and engineering occupations	1		
Life, physical, and social science occupations			
Community and social services occupations			
Legal occupations			
Education, training, and library occupations			
Arts, design, entertainment, sports, and media occupations		3	2
Entertainers and performers, sports and related workers	1	2	1
Athletes, coaches, umpires, and related workers		1	1
Athletes and sports competitors		'	1
Musicians, singers, and related workers		'	1
•		'	1
Musicians and singers			1
Media and communication equipment workers		'	1
Photographers			1
Photographers			1
Healthcare practitioners and technical occupations		1 1	1
Health diagnosing and treating practitioners		1 1	1
Veterinarians		1 1	1
Veterinarians		] ]	1
Healthcare support occupations		1 1	1
Occupational therapy and physical therapist assistants and aides	I	1	1
Occupational therapist assistants and aides	I	1 1	1
Occupational therapy assistants	I	1	1
Protective service occupations	I	7	5
Fire fighting and prevention workers		1	1
Firefighters	I	1	1
Firefighters		1	1
Law enforcement workers	I	4	3
Police officers	I	4	3
Police and sheriff's patrol officers	4	4	3
Other protective service workers		2	1
Security guards and gaming surveillance officers	.   1	1	1
Security guards	1	1	1
Miscellaneous protective service workers	I	1	1
Crossing guards		1	1
Food preparation and serving related occupations	I	4	3
Cooks and food preparation workers	I	1	1

Table 3. Fatal occupational injuries by occupation, Michigan, 2017–18 - Continued

Tubio of Future occupational injurios by occupation, infolligan, 2017 To Conti	2017	20	18
Occupation (1)	Number	Number	Percent
Cooks		1	1
Cooks, restaurant		1	1
Building and grounds cleaning and maintenance occupations	8	5	3
Supervisors of building and grounds cleaning and maintenance workers	4	3	2
First-line supervisors of building and grounds cleaning and maintenance workers	4	3	2
First-line supervisors of landscaping, lawn service, and groundskeeping workers	3	3	2
Building cleaning and pest control workers		2	1
Building cleaning workers		2	1
Janitors and cleaners, except maids and housekeeping cleaners		1	1
Personal care and service occupations	3		
Personal appearance workers		1	1
Barbers, hairdressers, hairstylists and cosmetologists		1	1
Barbers		1	1
Sales and related occupations	9	11	7
Supervisors of sales workers	3	3	2
First-line supervisors of sales workers	3	3	2
Retail sales workers	5	6	4
Cashiers	2	5	3
Cashiers	2	5	3
Retail salespersons	2	1	1
Retail salespersons	2	'1	1
Other sales and related workers	-	'	ı
Miscellaneous sales and related workers	'		
	'	1	
Door-to-door sales workers, news and street vendors, and related workers	2		1
Office and administrative support occupations.		5	3
Supervisors of office and administrative support workers		2	1
First-line supervisors of office and administrative support workers		2	1
First-line supervisors of office and administrative support workers		2	1
Financial clerks			1
Bill and account collectors		1	1
Bill and account collectors		1	1
Material recording, scheduling, dispatching, and distributing workers	2	2	1
Postal service workers	1 1	1	1
Postal service mail carriers		1	1
Stock clerks and order fillers		1	1
Stock clerks and order fillers		1	1
Farming, fishing, and forestry occupations	6	9	6
Agricultural workers	6	7	5
Miscellaneous agricultural workers	6	7	5
Farmworkers and laborers, crop, nursery, and greenhouse	2	1	1
Farmworkers, farm, ranch, and aquacultural animals	3	6	4
Construction and extraction occupations	34	24	15
Supervisors of construction and extraction workers	5	7	5
First-line supervisors of construction trades and extraction workers	5	7	5
First-line supervisors of construction trades and extraction workers	5	7	5
Construction trades workers	27	13	8
Construction laborers	12	8	5
Construction laborers	12	8	5
Construction equipment operators	2	1	1
Operating engineers and other construction equipment operators	2	1	1
Electricians	5	2	1
Electricians	5	2	1
Roofers	4	2	1
Roofers	4	2	1
Other construction and related workers	2	3	2
Highway maintenance workers	2	2	1
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Table 3. Fatal occupational injuries by occupation, Michigan, 2017-18 - Continued

Occupation (1)	2017	20	18
Occupation (**)	Number	Number	Percent
Highway maintenance workers	2	2	1
Extraction workers		1	1
Earth drillers, except oil and gas		1	1
Earth drillers, except oil and gas		1	1
Installation, maintenance, and repair occupations	17	15	10
Vehicle and mobile equipment mechanics, installers, and repairers	10	6	4
Automotive technicians and repairers	6	4	3
Automotive service technicians and mechanics	6	4	3
Heavy vehicle and mobile equipment service technicians and mechanics	2	1	1
Mobile heavy equipment mechanics, except engines	1	1	1
Other installation, maintenance, and repair occupations	6	9	6
Line installers and repairers	2	1	1
Electrical power-line installers and repairers	1	1	1
Maintenance and repair workers, general	3	3	2
Maintenance and repair workers, general	3	3	2
Miscellaneous installation, maintenance, and repair workers		1	1
Helpersinstallation, maintenance, and repair workers		1	1
Production occupations	6	12	8
Assemblers and fabricators		1	1
Miscellaneous assemblers and fabricators		1	1
Metal workers and plastic workers	5	6	4
Miscellaneous metalworkers and plastic workers		4	3
Other production occupations	1	3	2
Transportation and material moving occupations	23	32	21
Air transportation workers		2	1
Aircraft pilots and flight engineers		2	1
Commercial pilots		2	1
Motor vehicle operators	16	22	14
Driver/sales workers and truck drivers	15	18	12
Heavy and tractor-trailer truck drivers	9	14	9
Light truck or delivery services drivers	5	4	3
Taxi drivers and chauffeurs	1	2	1
Taxi drivers and chauffeurs	1	2	1
Material moving workers	7	5	3
Laborers and material movers, hand	4	1	1
Cleaners of vehicles and equipment		1	1
Refuse and recyclable material collectors		1	1
Refuse and recyclable material collectors		1	1
Military specific occupations (2)			

### Footnotes

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. CFOI fatality counts exclude illness-related deaths unless precipitated by an injury event. Dashes indicate no data reported or data that do not meet publication criteria.

<sup>(1)</sup> Occupation data are based on the Standard Occupational Classification system, 2010.

<sup>(2)</sup> Includes fatal injuries to persons identified as resident armed forces regardless of individual occupation listed.

Table 4. Fatal occupational injuries by selected demographic characteristics, Michigan, 2017–18

Worker characteristics	2017	017 2018	
	Number	Number	Percent
Total	153	155	100
Employee status			
Wage and salary workers (1)	102	110	71
Self-employed (2)	51	45	29
Gender			
Men	139	141	91
Women	14	14	9
Age (3)			
20 to 24 years	9	11	7
25 to 34 years	26	22	14
35 to 44 years	22	32	21
45 to 54 years	32	26	17
55 to 64 years	30	41	26
65 years and over	28	23	15
Race or ethnic origin (4)			
White, non-Hispanic	116	128	83
Black or African-American, non-Hispanic	25	17	11
Hispanic or Latino	10	8	5

### Footnotes:

<sup>(1)</sup> May include volunteers and workers receiving other types of compensation.

<sup>(2)</sup> Includes self-employed workers, owners of unincorporated businesses and farms, paid and unpaid family workers, and may include some owners of incorporated businesses or members of partnerships.

<sup>(3)</sup> Information may not be available for all age groups.

<sup>(4)</sup> Persons identified as Hispanic or Latino may be of any race. The race categories shown exclude data for Hispanics and Latinos.

NOTE: Data for all years are final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. CFOI fatality counts exclude illness-related deaths unless precipitated by an injury event. Dashes indicate no data reported or data that do not meet publication criteria.