Fatal Workplace Injuries in 2003: A Collection of Data and Analysis

U. S. Department of Labor
Elaine L. Chao, Secretary

U.S. Bureau of Labor Statistics
Kathleen P. Utgoff, Commissioner

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Preface

The Census of Fatal Occupational Injuries (CFOI), administered by the Bureau of Labor Statistics (BLS) in conjunction with the 50 States, the District of Columbia, and New York City, compiles detailed information on all work-related fatalities occurring in the United States. The program is based upon recommendations made in 1987 by 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 as 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. Detailed coding of each event captures information 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. Appendix G in this report explains the CFOI work relationship criteria.

Data compiled by the CFOI program are issued for the previous calendar year in an annual news release. Revised data are placed on the BLS Web site each spring following the initial release. Final data for 2003 are used in this publication.

These data are used by safety and health professionals, policy analysts, and researchers to prevent fatal work injuries in the following ways:

- Informing workers of life-threatening hazards associated with various jobs;
- Promoting safer work practices through enhanced job safety training;
- Developing new safety equipment;
- Assessing and improving workplace safety standards; and
- Identifying new areas for safety research.

Beginning with the 2003 reference year, the CFOI program began using the 2002 North American Industry Classification System (NAICS) for industries and the Standard Occupational Classification (SOC) system for occupations. Prior to 2003, the program used the Standard Industrial Classification (SIC) system and the U.S. Census Bureau's occupational classification system. Because of the substantial differences between the current and previous classification systems, the results by industry and occupation in 2003 constitute a break in series, and users are advised against making comparisons between data for the 2003 industry and occupation categories and the results for previous years.

This report reprints, with permission, five articles using CFOI data that were published previously—three in external publications, and two in BLS publications. The external journals include *Alaska Economic Trends*, the *American Journal of Industrial Medicine*, and the *IAIABC Journal. (International Association of Industrial Accident Boards and Commissions)* Two more articles are reprinted from the *Monthly Labor Review*, a BLS publication. This report also includes appendixes that present a variety of data tables and information relevant to the CFOI program.

This report was prepared in the Office of Compensation and Working Conditions under the administration of Associate Commissioner Katrina Reut and under the direction of Assistant Commissioner for the Office of Safety, Health, and Working Conditions, William Wiatrowski, and the Chief for the Division of Safety and Health Program Analysis and Control, Katharine Newman. Scott Richardson, CFOI Program Manager, supervised the preparation of this report by staff members Dino Drudi, Gregory Fayard, Samuel Meyer, Stephen Pegula, Jessica Sincavage, Peggy Suarez, and Mark Zak. Margaret Jones of the Office of Publications and Special Studies provided typesetting and layout services.

For additional information on fatal work injuries, call (202) 691-6170, e-mail the staff members in the Office of Safety, Health, and Working Conditions at *iffstaff@bls.gov*, or access the CFOI Web site at **http://www.bls.gov/iif/oshcfoi1.htm**. With the exception of the articles reprinted from outside sources, material in this publication is in the public domain and may, with appropriate credit, be reproduced without permission. For attribution information on the external articles, see the acknowledgments page following the table of contents.

The information in this publication is available to sensory impaired individuals upon request. Voice telephone: (202) 691-5200; Federal Relay Service: 1-800-877-8339.

Contents

Articles ***Page***

Years of Potential Life Lost: An Alternative for Measuring Workplace Fatalities
(*IAIABC Journal*, fall 2004, pp. 180-206)
Samuel Meyer and Stephen Pegula 1

Comparison of Fatal Occupational Injury Surveillance Systems Between the European Union and the United States
(*American Journal of Industrial Medicine*, 2003, pp 385-91)
Fernando G. Benavides, George L Delclos, Sharon B. Cooper, and Joan Benach 28

Foreign-born workers: trends in fatal occupational injuries, 1996-2001
(*Monthly Labor Review*, June 2004, pp. 42-53)
Katherine Loh and Scott Richardson 35

Work-related multiple-fatality incidents
(*Monthly Labor Review*, October 2004, pp. 20-37)
Dino Drudi and Mark Zak 47

Workplace Fatalities in Alaska
(*Alaska Economic Trends*, July 2004, pp. 13-18)
Kevin Virden and Dean Rasmussen 65

Appendix A. National Data

Fatal occupational injuries:
A-1. Industry by selected event or exposure (transportation incidents, homicides, and contact with objects and equipment), 2003 72
A-2. Industry by selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 88
A-3. Occupation by selected event or exposure (transportation incidents, homicides, and contact with objects and equipment), 2003 105
A-4. Occupation by selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 118
A-5. Worker characteristics by selected event or exposure (transportation incidents, homicides, and contact with objects and equipment), 2003 131
A-6. Worker characteristics by selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 132
A-7. Industry by class of worker (private sector wage and salary workers, government workers, and self-employed workers), 2003 133
A-8. Source of injury by major occupational group, 2003 150
A-9. Detailed event or exposure by year, 1995-2003 162

Contents—Continued

Appendix B. State and Area Data *Page*

Fatal occupational injuries:
B-1. State by year, 1992-2003 166
B-2. State by major industry division, 2003 167
B-3. State by major occupational group, 2003 168
B-4. State by event or exposure, 2003 169
B-5. State by selected event or exposure (transportation incidents and homicides), 2003 170
B-6. Selected metropolitan areas by major industry division, 2003 171
B-7. Selected metropolitan areas by major occupational group, 2003 172
B-8. Selected metropolitan areas by event or exposure, 2003 173
B-9. Selected metropolitan areas by selected event or exposure (transportation incidents and homicides), 2003 174

Appendix C. Census of Fatal Occupational Injuries Fatality Rates

Fatal occupational injuries:
C-1. Number, employment, and rates by selected worker characteristics, occupations, and industries, 2003 176

Appendix D. Occupations with High Fatality Rates

Fatal occupational injuries:
D-1. Occupations with the highest fatality rates by selected characteristics, 2003 181

Appendix E. Average Years of Potential Life Lost

E-1. Number of fatal occupational injuries and average years of potential life lost for all workers of white or black races by selected characteristics, 2003 196

Appendix F. Profiles of Fatal Work Injuries and Hazards

Job-related fatalities by selected characteristics, 2003:
F-1. Homicides 201
F-2. Hispanic or Latino workers 210
F-3. Workers aged 19 and under 227
F-4. Private residential construction industries 233

Appendix G. Census of Fatal Occupational Injuries Work Relationship Criteria 242

Appendix H. State Census of Fatal Occupational Injuries Agencies, BLS Regional and National Contacts, and Telephone Numbers 243

Appendix I. Research Articles and Reports 246

Acknowledgments

Three journals—*Alaska Economic Trends*, *American Journal of Industrial Medicine*, and the *IAIABC Journal (International Association of Industrial Accident Boards and Commissions)*—have kindly granted the Bureau of Labor Statistics (BLS) permission to reprint previously published articles in this publication.

The article, "Workplace Fatalities in Alaska," by Kevin Virden and Dean Rasmussen, is reprinted from the July 2004 issue of *Alaska Economic Trends*. This publication is public information and can be accessed at http://labor.state.ak.us/trends/.

The article, "Years of Potential Life Lost: An Alternative for Measuring Workplace Fatalities," by Samuel Meyer and Stephen Pegula, is reprinted with permission from the *IAIABC Journal*, vol. 41, no. 2, pp. 180-206. All requests for reprints should be directed to:

Melissa Wilson
Publications, Education Manager
IAIBC Journal
5610 Medical Circle, Suite 24
Madison, Wisconsin 53711
Web site: http://www.iaiabc.org/

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Years of Potential Life Lost: An Alternative for Measuring Workplace Fatalities

Samuel Meyer*
Stephen Pegula**

Although the number and rate of fatal occupational injuries have declined in recent years, the risk of fatal injury to the American worker is still a concern, especially in certain high-risk occupations and industries. By gathering data on fatal work injuries, analysts hope to identify some commonalities in these occupational fatalities that might allow for the creation of more effective workplace safety programs. Also, by quantifying the significance of the risk and the impact associated with fatal injury, policymakers can make more informed decisions about how best to distribute resources.

**Samuel Meyer, Economist, U.S. Bureau of Labor Statistics, Washington, DC. Email: meyer_s@bls.gov*
***Stephen Pegula, Economist, U.S. Bureau of Labor Statistics, Washington, DC. Email: pegula_s@bls.gov*

Data from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI) can be used to categorize fatalities based on a worker's demographic characteristics, the industry and occupation in which the worker was employed, and the circumstances that precipitated the occupational fatality. Two commonly-used measures are the total number of workplace fatalities and the fatality rate for a particular group. In this paper, another means of measuring fatal work injuries is applied—the years of potential life lost (YPLL) as a result of fatal injury.[1]

As its name implies, the YPLL, as it is used here, is the number of years of potential life a decedent loses when he or she is fatally injured at work. YPLL incorporates both the decedent's age at death as well as the life expectancy of the decedent, which is affected by the decedent's race, sex, and age. The purpose of this analysis is to present the years of potential life lost statistic for a cross-section of CFOI data from 1995 to 2000 and to compare and contrast the findings with other measures of workplace fatalities.

Current Assessment Methods

Because CFOI data are gleaned from multiple sources, a comprehensive picture of each fatality can be obtained from them, including who was involved in the fatality, how the fatality occurred, and in what capacity the worker was functioning at the time of the injury. With this information, users of CFOI data can craft strategies that target areas of particular significance.

Analysts use a variety of statistics to measure workplace fatalities. One method is to look at the total number of fatalities. Table A shows the type of data available using this method.

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[1] For an overview of YPLL, see:
http://www.cdc.gov/ncipc/wisqars/fatal/help/helpfile.htm#yppl
YPLL data are available at: http://webappa.cdc.gov/sasweb/ncipc/ypll.html

TABLE A
Fatal occupational injuries to all workers by selected characteristics, 1995-2000

Characteristic	1995	1996	1997	1998	1999	2000
Total	6,275	6,202	6,238	6,055	6,054	5,920
Employee Status						
Wage and salary	5,074	4,977	4,970	4,804	4,904	4,736
Self-employed	1,201	1,225	1,268	1,251	1,150	1,184
Sex						
Male	5,736	5,688	5,761	5,569	5,612	5,471
Female	539	514	477	486	442	449
Age						
35 to 44 years	1,571	1,586	1,524	1,525	1,510	1,473
45 to 54 years	1,256	1,242	1,302	1,279	1,333	1,313
Race or ethnic origin						
White	4,599	4,586	4,576	4,478	4,410	4,244
Black	684	615	661	583	616	575
Hispanic	619	638	658	707	730	815
Event or exposure						
Transportation incidents	2,587	2,601	2,605	2,645	2,618	2,573
Assaults and violent acts	1,280	1,165	1,111	962	909	930
Falls	651	691	716	706	721	734
Occupation						
Service occupations	541	498	492	441	469	433
Farming, forestry, and fishing	869	891	925	930	904	806
Operators, fabricators, and laborers	2,070	2,040	2,170	2,155	2,201	2,119
Industry						
Construction	1,055	1,047	1,107	1,174	1,191	1,155
Manufacturing	709	725	744	698	722	668
Transportation and public utilities	901	970	1,008	911	1,008	957

Counts by themselves, however, do not present a complete picture. For instance, self-employed workers make up approximately 20 percent of the workplace fatalities but less than 10 percent of the employed population, which implies that they face a greater risk. Since fatality counts do not incorporate employment or hours worked, there is no way of ascertaining the likelihood of incurring a fatal work injury by using counts alone.

A statistic that presents an approximation of the likelihood of incurring a fatal occupational injury is the fatality rate. This statistic is calculated by dividing the number of fatal injuries to a specific group of workers by the number of people employed in that same group, resulting in a figure that represents the number of fatal occupational injuries per a certain number of workers employed[2] (see the Research Methods section for more detail). Table B provides examples.

The fatality rate offers a different perspective on fatal work injuries than the count. By using the fatality rate, analysts can compare groups while accounting for different levels of employment. Yet, fatality rates also have limits. For example, two occupations might have the same fatality rates, but Occupation A averages 300 fatal work injuries per year while Occupation B averages 6 fatal work injuries per year. Looking at the fatality rate alone, these two occupations are equal in terms of the likelihood of incurring a workplace fatality. However, the difference in the counts, or the number of fatal work injuries per year, cannot be appreciated by solely looking at the fatality rate. Thus, while the fatality rate can adjust for differences in employment, it does not account for differences in counts.

Counts and rates provide the data user with the frequency and likelihood of fatal workplace injuries in a particular group. What they do

[2] The rates are based on employment. They factor out differences in the number of fatal work injuries between worker groups due to different employment levels. They do not take into account differences in the number of hours worked. Hours-based rates, which factor out these differences, are generally considered more accurate. However, because of limitations in the availability of data for hours worked, the rates are employment-based. See the Research Methods section for more details on the fatality rate.

TABLE B
Fatality rate per 100,000 workers of selected groups, 1995-2000

Characteristic	1995	1996	1997	1998	1999	2000
Overall Fatality Rate	4.9	4.8	4.8	4.5	4.5	4.3
Employee Status						
Wage and salary	4.4	4.2	4.1	3.9	3.9	3.7
Self-employed	11.1	11.3	11.7	11.8	11.1	11.7
Sex						
Male	8.3	8.2	8.1	7.7	7.7	7.4
Female	0.9	0.9	0.8	0.8	0.7	0.7
Age						
35 to 44 years	4.6	4.5	4.2	4.2	4.1	4.0
45 to 54 years	5.2	4.9	4.9	4.6	4.6	4.4
Race or ethnic origin*						
White	4.7	4.6	4.6	4.5	4.4	4.2
Black	5.1	4.5	4.8	4.0	4.1	3.8
Hispanic	5.4	5.3	5.1	5.2	5.2	5.6
Occupation						
Service occupations	3.2	2.9	2.8	2.5	2.6	2.3
Farming, forestry, and fishing	23.4	24.4	25.9	25.8	25.8	23.3
Operators, fabricators, and laborers	11.4	11.2	11.8	11.8	12.1	11.5
Industry						
Construction	14.7	14.0	14.1	14.6	14.0	12.9
Manufacturing	3.5	3.5	3.6	3.4	3.6	3.3
Transportation and public utilities	12.6	13.4	13.3	11.8	12.7	11.8

*All rates in Table B, except race categories, use updated CFOI data and may differ from published CFOI rates. CFOI changed the way it published race categories in 2000. To be consistent, published CFOI rates and not updated CFOI rates were used for the race fatality rate figures.

not provide, however, is any indication of the impact of each fatal work injury. For example, the economic impact of the death of a 26-year old carpenter will differ from the economic impact of the death of a 76-year old banker. By using the years of potential life lost, users of the data can more accurately consider the impact, be it economic or otherwise, of a workplace fatality than by using counts or rates alone.

Years of Potential Life Lost with a Variable Life Expectancy[3]

The years of potential life lost are easy numbers to calculate, yet they yield interesting results. To calculate YPLL, one simply subtracts the age at death from the life expectancy of the decedent. The age at which a person dies on the job is taken directly from CFOI data. In our model, life expectancy data from the Centers for Disease Control and Prevention (CDC) are assigned based on the sex, race, and age of the decedent[4] (see the Research Methods section for more details on how YPLL was calculated).

Like counts and rates, the YPLL does not alone comprehensively characterize fatality data, but it does provide important information. YPLL allows fatal work injuries to be framed in light of their impact on society either as an economic indicator or as a public health indicator. YPLL is especially valuable in describing injuries because injuries, including those not work-related, were the leading cause of death to people under the age of 35 in the United States in 1999.[5] Additionally,

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[3] The terms years of potential life lost and YPLL will be used interchangeably in this paper.
[4] There are different ways to determine life expectancy. Some ascribe the same life expectancy to all workers regardless of their demographic characteristics. This analysis uses life expectancy data that vary depending on the race, sex, and age of the decedent. While the more general method is widely used and allows comparisons with other studies, the more complex method appears to provide a more accurate measure of the years of potential life lost for workers killed in fatal occupational injuries. See the Research Methods section for more details.
[5] More information can be found on the CDC website at: http://www.cdc.gov/ncipc/wisqars/fatal/help/helpfile.htm#yppl

this statistic paints a more personal picture of fatal injuries than can be seen by looking at the other measures. For instance, during the 6 years of this study, 30,110[6] workers were fatally injured at work, and those workers lost an estimated 1,020,368.3 years of potential life. The average number of years of potential life lost for the 30,110 decedents included in this analysis was 33.9[7] years. The impact of a workplace fatality may be more comprehensible when expressed as a function of the years of potential life a decedent is losing rather than simply a number or rate.

Table C shows a more detailed breakdown of the average years of potential life lost with respect to employee status, race, and sex along with the total number of cases[8] used to derive the average YPLL.

Variation exists among demographic categories with respect to the fatality rate and years of potential life lost. While self-employed workers have a fatality rate that is approximately 3 times larger than wage and salary workers, the self employed have a much smaller average YPLL (27.1) than wage and salary workers (35.9). Females have a smaller fatality rate in relation to males, yet they lose an average of 6 years of additional life per workplace fatality.

Undoubtedly, YPLL reflects the type of decedents in a given group. With respect to life expectancy, white workers and females have a higher life expectancy than black workers and males. Thus, occupations with a large number of white workers and/or a large number of females will likely have a higher YPLL relative to occupations with a large number of black workers and/or a large number of males, all else

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[6] The figure 30,110 represents workers who were considered for the YPLL portion based on the exclusions necessary to perform the YPLL analysis. See footnote 15 for more details.

[7] In this analysis, all YPLL figures are average YPLL.

[8] The number of cases, which is included in most tables, represents the number of fatalities from which the average YPLL was calculated. For example, the total years of life lost for workers in the analysis was 1,020,368.3 years. The total number of fatalities was 30,110. The average YPLL is the total years of potential life lost (1,020,368.3) divided by the number of fatalities (30,110), or 33.9 years.

held equal. With respect to age at death, again with all else being equal, occupations with a large number of young workers (and, presumably, a large number of young workers fatally injured at work) will usually have a higher YPLL than occupations with a large number of older workers (see footnote 14 for links to the life expectancy data used in this analysis).

TABLE C
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected demographic characteristics, 1995-2000

Characteristic	Average YPLL	Percent Deviation**	Number	Percent Distribution
Overall	33.9	0.0%	30,110	100.0%
Employee Status*				
Wage and salary	35.8	5.8%	23,276	77.3%
Self-employed	27.1	-20.1%	6,648	22.1%
Race				
White	34.2	1.0%	26,817	89.1%
Black	31.0	8.4%	3,293	10.9%
Sex				
Male	33.4	-1.3%	27,925	92.7%
Female	39.5	16.5%	2,185	7.3%

* There are 186 cases where the decedent was not wage and salary nor self-employed. In 127 cases, the decedent was a volunteer. The remaining cases included decedents classified as off-duty police as well as decedents for whom no employee status could be assigned.

** Percent deviation is used here to indicate the divergence of the average YPLL for a particular group from the average overall YPLL. This deviation is expressed in terms of the percent it (the average YPLL of a particular group) differs from the average overall YPLL. It is meant to quantify each average YPLL relative to the average overall YPLL, not to represent the spread of each category. This is the case in Table C and all tables in the analysis and appendices. The deviations were calculated using numbers not rounded off, so they may differ slightly from those calculated using the rounded figures in the text.

Years of Potential Life Lost by Occupation, Industry, and Event

Among individual occupations, decedents in construction trades tend to have high average years of potential life lost, while decedents in agricultural occupations tend to have low average years of potential life lost. Table D highlights these differences.[9]

TABLE D
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected occupations, 1995-2000

Occupation	Average YPLL	Percent Deviation	Number	Percent Distribution
Mean	33.9	0.0%	30,110	100.0%
Sailors and deckhands	40.5	19.6%	109	0.4%
Cashiers	39.8	17.4%	331	1.1%
Construction laborers	39.5	16.5%	1,642	5.5%
Roofers	38.9	14.9%	318	1.1%
Structural metal workers	38.7	14.3%	264	0.9%
Taxicab drivers	30.5	-9.9%	424	1.4%
Managers & administrators, n.e.c.*	30.4	-10.3%	1,223	4.1%
Supervisors & proprietors, sales occupations	29.7	-12.3%	952	3.2%
Managers, farms except horticultural	20.9	-38.5%	453	1.5%
Farmers, except horticultural	20.8	-38.7%	1,596	5.3%

* N.e.c. stands for "not elsewhere classified."

[9] All occupations, industries, and events examined in this analysis had at least 100 fatal work injuries from 1995 to 2000 with the given constraints for YPLL. See the Research Methods section for more details on what data were used in this analysis.

Many of the occupations with substantial average years of potential life lost are construction occupations. These include construction laborers (39.5), roofers (38.9), structural metal workers (38.7), and electrical power installers and repairers (37.4). Another notable occupational group is farming occupations. Two of the farming categories – (1) farmers, except horticultural, and (2) managers, farms except horticultural – each have very low average years of potential life lost, 20.8 20.9, respectively.

TABLE E
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected industries, 1995-2000

Industry	Average YPLL	Percent Deviation	Number	Percent Distribution
Mean	33.9	0.0%	30,110	100.0%
Eating places	40.5	19.6%	456	1.5%
Water, sewer, & utility lines construction	40.1	18.4%	483	1.6%
Structural steel erection	39.5	16.5%	285	0.9%
Roofing, siding, and sheet metal work	38.4	13.3%	532	1.8%
Ornamental shrub and tree services	38.1	12.5%	338	1.1%
Taxicabs	30.9	-8.8%	371	1.2%
Dairy farms	28.3	-16.4%	276	0.9%
Beef cattle, except feedlots	24.7	-27.1%	215	0.7%
General farms, primarily animal	23.1	-32.0%	169	0.6%
General farms, primarily crop	22.4	-33.8%	1,219	4.0%

A similar analysis is possible by examining industry and event characteristics. Table E details the years of potential life lost for 10 selected industries. Much like occupation, fatally injured workers in construction-related industries have high average years of potential life lost, while fatally injured workers in agriculture-related industries tend to have lower average years of potential life lost.

Table F shows some selected events and their YPLL. Events that are commonly associated with construction, like excavating and working with electrical current, have decedents with a high average YPLL. On the other hand, events that are commonly associated with agriculture, like 'overturned vehicle – nonhighway' (which would include events like overturned tractors) and 'assaults by animals, n.e.c.,' have decedents with a low average YPLL. For a complete listing of average YPLL by occupation, industry, and event, see the appendix tables.

Comparing the Measures of Occupational Fatalities

Any one measure of fatal occupational injuries offers an incomplete perspective when viewed by itself. Looking only at the total count of fatalities has value, but it is more useful when utilized in conjunction with another statistic, like the fatality rate. Fatality rates, which show the relationship between fatal injuries and employment, can also be misleading, independent of other measures. The count and rate should be considered in tandem in order to more fully understand the risks faced by workers.

The years of potential life lost statistic has its strengths and weaknesses as a measure of the impact of workplace fatalities as well. It is the only one of the three that incorporates life expectancy into its equation and, therefore, is the only statistic that gauges the impact of a fatal work injury. On the other hand, the years of potential life lost statistic does not factor in the number of workers employed in an occupation.[10] In addition, a data user would not be able to ascertain the number of fatal work injuries in a given group nor the likelihood of incurring fatal work injuries in that group if he or she used the YPLL statistic alone.

TABLE F
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected events, 1995-2000

Event	Average YPLL	Percent Deviation	Number	Percent Distribution
Mean	33.9	0.0%	30,110	100.0%
Excavation or trenching cave-in	40.7	20.0%	224	0.7%
Contact with overhead power lines	40.3	18.9%	725	2.4%
Contact with electric current of machine, tool, appliance, or light fixture	39.8	17.5%	246	0.8%
Contact with wiring, transformers, or other electrical components	39.1	15.4%	416	1.4%
Fall from building girders or other structural steel	39.1	15.4%	233	0.8%
Struck by rolling, sliding objects on floor or ground level	27.6	-18.6%	410	1.4%
Overturned vehicle – nonhighway	26.9	-20.6%	1,149	3.8%
Fall to floor, walkway, or other surface	26.6	-21.4%	193	0.6%
Fell from and struck by vehicle, mobile equipment - nonhighway	25.7	-24.3%	351	1.2%
Assaults by animals, n.e.c.	23.4	-31.1%	148	0.5%

If all three statistics are considered together, a more complete picture of fatal work injuries begins to emerge. Data users can then assess the frequency, likelihood, and impact of fatal work injuries in certain areas if all the measures are used. Tables G-I show values for the average years of potential life lost, average annual fatalities, and average annual fatality rate for selected occupations from 1995-2000.[11]

Notice that there is no discernible pattern as to how the three measures fluctuate. A high average YPLL does not necessarily mean a high average number of fatalities or a high fatality rate. On the other hand, a low average YPLL does not always mean a low number of fatalities or a low fatality rate. The occupations vary significantly according to each of the three measures. For example, sailors and deckhands, who have a high average years of potential life lost (40.5), do not appear among the occupations with a high number of annual average fatal injuries, but have a high average annual fatality rate (114 fatalities per 100,000 employed). Further, airplane pilots and navigators do not have a high average years of potential life lost. Nevertheless, workers in this occupation group face a high risk of fatal injury as evidenced by the high number of fatalities and high fatality rate.

Worthy of particular attention in this analysis is the occupation 'construction laborers,' as it is among the occupations with the highest counts, fatality rates, and average YPLLs. The rate of fatal injury for construction laborers is 37 per 100,000 employed. Additionally, the

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[10] An example of a hybrid of YPLL that does factor in employment is the YPLL rate, which James F. Bena, A. John Bailer, Robert M. Park, and William E. Halperin applied to a data set in their article entitled "A Graphical Analysis of Mortality Rates and Years of Potential Life Lost," which was published in *Human and Ecological Risk Assessment*: Vol. 7, No. 7, pages 1843-1857.

[11] Each method of analyzing workplace fatalities examines a different set of workplace fatalities. The total fatalities method looks at all fatal work injuries. The fatality rate uses only decedents aged 16 and older. YPLL looks at those aged 16 and older who work in the private sector, are either white or black, and have a specific industry and occupation. All of the 36,744 fatal work injuries that occurred in the United States from 1995 to 2000 are included in the total fatalities section. The fatality rate analysis has 36,579 records – those under the age of 16 or having an unspecified age were excluded. Of the 36,744 recorded fatal work injuries from 1995 to 2000, 30,110 are used in the YPLL analysis.

average of 318 fatal occupational injuries incurred by construction laborers per year is also very high. Finally, fatally injured construction laborers typically lose a great deal of potential life relative to decedents employed in other occupations.

TABLE G
Average years of potential life lost (YPLL), average annual number of fatal work injuries (FWI's), and average annual fatality rate for selected occupations by average YPLL, 1995-2000, arrayed in descending order by average YPLL

Occupation	Avg. YPLL	Avg. Annual FWI's	Annual Fatality Rate
Sailors and deckhands	40.5	25	114
Cashiers	39.8	79	3
Construction laborers	39.5	318	37
Roofers	38.9	58	28
Structural metal workers	38.7	46	69
Laborers, except construction	37.8	201	15
Fishers	37.5	65	131
Electrical power installers and repairers	37.4	37	28
Groundskeepers and gardeners, except farm	37.0	103	12
Electricians	36.7	105	13

TABLE H
Average annual number of fatal work injuries (FWI's), average years of potential life lost (YPLL), and average annual fatality rate for selected occupations by average annual number of FWI's, 1995-2000, arrayed in descending order by average annual number of FWI's

Occupation	Avg. Annual FWI's	Avg. YPLL	Annual Fatality Rate
Truck drivers	842	33.2	28
Supervisors and proprietors, sales occupations	437	29.7	4
Construction laborers	318	39.5	37
Farmers, except horticultural	269	20.8	26
Managers and administrators, n.e.c.	220	30.4	3
Laborers, except construction	201	37.8	15
Farm workers	199	33.7	23
Airplane pilots and navigators	105	34.0	86
Electricians*	105	36.7	13
Timber cutters	102	33.6	138

TABLE I
Average annual fatality rate, average years of potential life lost (YPLL), and average annual number of fatal work injuries (FWI's), for selected occupations by average annual fatality rate, 1995-2000, arrayed in descending order by average annual fatality rate

Occupation	Annual Fatality Rate	Avg. YPLL	Avg. Annual FWI's
Timber cutters	138	33.6	102
Fishers	131	37.5	65
Sailors and deckhands	114	40.5	25
Airplane pilots and navigators	86	34.0	105
Structural metal workers	69	38.7	46
Managers, farms except horticultural	49	20.9	78
Construction laborers	37	39.5	318
Taxi drivers and chauffeurs	33	30.5	82
Truck drivers	28	33.2	842
Roofers	28	38.9	58

Conclusion

Years of potential life lost represents the number of years each decedent is losing at the time of his or her death. According to this measure, decedents in some fields (like farming) lose fewer years of potential life on average, and decedents in other fields (like construction) lose more years of potential life on average. In both cases, the YPLL analysis reflects the type of decedents, by race, sex, and age, who work in those occupations.

The three measures (counts, rates, and YPLL) can be used to categorize the frequency, likelihood, and impact of workplace fatalities. While the first two statistics are widely promulgated, YPLL is not employed as often. It is important to evaluate the years of potential life lost from a fatal work injury so that the impact of such an injury can be calculated. By examining the frequency, likelihood, and impact of workplace fatalities, policymakers and safety professionals can develop strategies to best utilize resources to keep the American worker protected.

Research Methods

The most complete and comprehensive source for workplace fatality data for the United States is the Census of Fatal Occupational Injuries (CFOI). The first census of all fatal work injuries in the entire United States was performed in 1992. Since then, CFOI has continued to collect fatality data from all 50 states, the District of Columbia, and New York City. To ensure data of the highest quality, CFOI gathers source documents from a wide variety of areas. These include death certificates, coroner's reports, police reports, media reports, toxicology reports, and OSHA reports.

CFOI, which is conducted by the Bureau of Labor Statistics (BLS), collects, aggregates, and disseminates information on all fatal injuries deemed to have occurred at work in the United States. Among the data that CFOI collects for each fatality are the demographic charac-

teristics of the decedent, the specifics of the event that precipitated the fatality, and the decedent's employment information. Various composite categories of data, like race, event, and occupation, are then published using these case data.

Fatal work injury rates, or fatality rates, are calculated each year by CFOI. The equation for this statistic is as follows:

$$\text{Fatality Rate}_x = (\text{Number of fatalities}_x / \text{Employment}_x) * 100{,}000$$

For a certain group (x), the quotient of the number of fatalities and the employment multiplied by 100,000 is the fatality rate. The fatality rate shows the number of workplace fatalities in a given group per 100,000 workers in that group. Employment for fatality rates is taken from the Current Population Survey (CPS). Since CPS does not count workers under the age of 16, fatal work injuries to those under the age of 16 were excluded for fatality rate calculations.

YPLL is calculated by taking the life expectancy of the worker and subtracting the age at which the worker dies on the job. So, if a worker has a life expectancy of 70 years and dies at age 55, his or her years of potential life lost as a result of the fatal work injury are 15.[12]

This study uses a set of three variables to assign life expectancy. Life expectancy numbers from the Centers for Disease Control and Prevention (CDC) are used. These numbers are broken down by the race,

[12] YPLL was calculated using these steps. First, the age of the decedent at the time of his or her death was verified. Six sets of life expectancy numbers were used – one for each year between 1995 and 2000. Each of these annual numbers contains life expectancies by race and sex by age groups, which were published in five-year increments.

A decedent was assigned to an age group by placing him or her in the nearest age category. For example, the 30 year-old category would include decedents aged 28, 29, 30, 31, and 32. The 35 year-old category would include decedents aged 33, 34, 35, 36, and 37.

After the life expectancy was determined, given the decedent's age at death, year of death, race, and sex, the decedent's age was subtracted from the life expectancy. The difference between these values is the years of potential life lost for that individual.

sex, and age of the decedent. Each year of the analysis, from 1995 to 2000,[13] has distinctive life expectancy figures for each race/sex/age category. Here is a summary of the criteria used to attribute a life expectancy to each decedent:

Race – Due to life expectancy data availability, only white and black workers will be considered. According to CFOI, persons identified as Hispanic may be of any race. Because the life expectancy tables are categorized by race, fatalities incurred by workers of Hispanic origin are included in the analysis provided the race of the decedent was white or black.

Sex – Decedents are categorized as either male or female.

Age – Decedents who were under the age of 16 were excluded from the YPLL calculations. Decedents were assigned a life expectancy based on their age at death as well as their year of death.[14]

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[13] For 1995 and 1996, the life expectancy tables went up to only age 85. For 1997-2000, life expectancies were published up to age 100. For 1995 and 1996, life expectancy data for the age 90 and 95 groups are taken from the 1997 figures. This change affects 12 records.

[14] For additional data on the life expectancy data used in this analysis, please see: http://www.cdc.gov/nchs/products/pubs/pubd/lftbls/life/1966.htm

For the life expectancy data used in this analysis, access the following documents:

1995 – http://www.cdc.gov/nchs/data/lifetables/life95_2.pdf - Table 6.4
1996 – http://www.cdc.gov/nchs/data/nvsr/nvsr47/nvs47_13.pdf - Table 4
1997 – http://www.cdc.gov/nchs/data/nvsr/nvsr47/nvs47_28.pdf - Table 11
1998 – http://www.cdc.gov/nchs/data/nvsr/nvsr48/nvs48_18.pdf - Table 11
1999 – http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50_06.pdf - Table 11
2000 – http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_03.pdf - Table 11

Here are two examples. First, suppose a 49-year-old black female dies while at work in 1996. Since the year of death is 1996, the 1996 values are used. Since the decedent was 49 years old, she will be assigned to the age 50 category (see footnote 17 for more details on how decedents are assigned by age). In 1996, a 50-year-old black female had a life expectancy of 78.5 years. The YPLL is 78.5 (life expectancy) – 49 (age at death), or 29.5 years. Next, suppose a 38-year-old white male dies while at work in 1999. Since the year of death is 1999, the 1999 values are used. Since the decedent was 38 years old, he will be assigned to the age 40 category. In 1999, a 40 year-old white male had a life expectancy of 76.9 years. The YPLL is 76.9 (life expectancy) – 38 (age at death), or 38.9 years.

Additional exclusions were made in this analysis. Only private sector workers were included. Also, all decedents who had an unspecified occupation or industry were removed.

Percent deviation is used here to indicate the divergence of the average YPLL for a particular group from the average overall YPLL. This deviation is expressed in terms of the percent it (the average YPLL of a particular group) differs from the average overall YPLL. It is meant to quantify each average YPLL relative to the average overall YPLL, not to represent the spread of each category. The deviations were calculated using numbers not rounded off, so they may differ slightly from those calculated using the rounded figures in the text.

Occupations are defined by the 1990 US Census Bureau Occupation Classification System. Industries are defined by the 1987 Standard Industrial Classification (SIC) system. Finally, events are defined by the 1992 BLS Occupational Injury and Illness Classification System (OIICS).

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Samuel Meyer is an economist with the Bureau of Labor Statistics. He has worked with the Census of Fatal Occupational Injuries, part of the BLS occupational safety and health statistics program, since 2002. In addition to the years of potential life lost from workplace injuries, his research has included confined space fatalities and injuries to workers in farming occupations.

Stephen Pegula is an economist with the Bureau of Labor Statistics. He has worked in the Office of Safety, Health, and Working Conditions for 1.5 years. He has published research on fatal work injuries to self-employed workers, occupational fatalities among government workers, and workplace suicides.

Appendix I: Occupation, Industry, and Event Tables with Average YPLL, 1995-2000

APPENDIX TABLE 1
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected occupations, 1995-2000

Occupation	Average YPLL	Percent Deviation	Number	Percent Distribution
Mean	33.9	0.0%	30,110	100.0%
Sailors and deckhands	40.5	19.6%	109	0.4%
Cashiers	39.8	17.4%	331	1.1%
Construction laborers	39.5	16.5%	1,642	5.5%
Roofers	38.9	14.9%	318	1.1%
Structural metal workers	38.7	14.3%	264	0.9%
Laborers, except construction	37.8	11.6%	1,002	3.3%
Fishers	37.5	10.5%	294	1.0%
Electrical power installers and repairers	37.4	10.3%	183	0.6%
Miscellaneous machine operators	37.1	9.4%	169	0.6%
Groundskeepers	37.0	9.0%	520	1.7%
Industrial truck and tractor equipment operators	36.9	8.8%	254	0.8%
Electricians	36.7	8.4%	563	1.9%
Welders and cutters	36.5	7.7%	368	1.2%
Driver-sales workers	35.8	5.6%	217	0.7%
Painters	35.5	4.7%	226	0.8%
Carpenters	34.9	2.9%	530	1.8%
Sales representatives, commodities except retail	34.5	1.7%	136	0.5%
Automobile mechanics and repairers	34.1	0.5%	263	0.9%

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APPENDIX TABLE 1 continued

Occupation	Average YPLL	Percent Deviation	Number	Percent Distribution
Airplane pilots and navigators	34.0	0.3%	552	1.8%
Heavy equipment mechanics	34.0	0.3%	174	0.6%
Bus, truck, and stationary engine mechanics	33.9	-0.1%	175	0.6%
Operating engineers	33.7	-0.5%	236	0.8%
Farm workers	33.7	-0.7%	988	3.3%
Timber cutters	33.6	-0.7%	581	1.9%
Plumbers	33.5	-1.1%	194	0.6%
Managers, food serving and lodging establishments	33.5	-1.2%	353	1.2%
Truck drivers	33.2	-2.0%	4,762	15.8%
Construction supervisors, n.e.c.	33.1	-2.4%	373	1.2%
Janitors and cleaners	33.1	-2.4%	281	0.9%
Supervisors, production occupations	32.2	-5.1%	201	0.7%
Taxicab drivers	30.5	-9.9%	424	1.4%
Managers and administrators, n.e.c.	30.4	-10.3%	1,223	4.1%
Supervisors and proprietors, sales occupations	29.7	-12.3%	952	3.2%
Managers, farms except horticultural	20.9	-38.5%	453	1.5%
Farmers, except horticultural	20.8	-38.7%	1,596	5.3%

APPENDIX TABLE 2
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected industries, 1995-2000

Industry	Average YPLL	Percent Deviation	Number	Percent Distribution
Mean	33.9	0.0%	30,110	100.0%
Eating places	40.5	19.6%	456	1.5%
Water, sewer, and utility lines construction	40.1	18.4%	483	1.6%
Structural steel erection	39.5	16.5%	285	0.9%
Roofing, siding, and sheet metal work	38.4	13.3%	532	1.8%
Ornamental shrub and tree services	38.1	12.5%	338	1.1%
Oil and gas field services, n.e.c.	38.0	12.0%	219	0.7%
Electrical work	38.0	12.0%	524	1.7%
Special trade contractors, n.e.c.	37.6	10.8%	422	1.4%
Shellfish	37.1	9.6%	149	0.5%
Concrete work	37.1	9.4%	177	0.6%
Miscellaneous amusement, recreation services, n.e.c.	37.0	9.1%	174	0.6%
Industrial buildings and warehouses	36.8	8.6%	158	0.5%
Plumbing, heating, and air-conditioning	36.6	7.9%	364	1.2%
Refuse systems	36.3	7.1%	199	0.7%
Nonresidential construction, n.e.c.	36.3	7.1%	267	0.9%
Heavy construction, n.e.c.	36.3	7.1%	346	1.1%
Gasoline service stations	35.9	5.9%	178	0.6%
Lawn and garden services	35.9	5.8%	217	0.7%
Paper hanging and painting	35.9	5.8%	239	0.8%
Carpentry work	35.8	5.7%	213	0.7%
Highway and street construction	35.3	4.2%	514	1.7%

Continued on next page

APPENDIX TABLE 2 continued

Industry	Average YPLL	Percent Deviation	Number	Percent Distribution
Miscellaneous business services, n.e.c.	35.1	3.7%	202	0.7%
Hotels and motels	34.9	3.0%	151	0.5%
Excavation work	34.9	3.0%	262	0.9%
Air transportation, nonscheduled	34.9	2.9%	226	0.8%
Single-family housing construction	34.8	2.8%	395	1.3%
Drinking places	34.8	2.6%	198	0.7%
Grocery stores	34.6	2.2%	598	2.0%
Local trucking, without storage	34.2	0.8%	734	2.4%
Detective and armored car services	33.3	-1.8%	222	0.7%
Trucking and courier services, except air, unspecified	33.3	-1.8%	201	0.7%
General automotive repair shops	33.2	-2.0%	245	0.8%
Logging	32.8	-3.3%	784	2.6%
Electric services	32.7	-3.6%	168	0.6%
Trucking, except local	32.1	-5.3%	1,865	6.2%
Scrap and waste materials	31.4	-7.2%	165	0.5%
Taxicabs	30.9	-8.8%	371	1.2%
Dairy farms	28.3	-16.4%	276	0.9%
Beef cattle, except feedlots	24.7	-27.1%	215	0.7%
General farms, primarily animal	23.1	-31.8%	169	0.6%
General farms, primarily crop	22.4	-34.0%	1,219	4.0%

APPENDIX TABLE 3
Average years of potential life lost (YPLL), percent deviation from the mean YPLL, number of cases, and percent distribution of number of cases for selected events, 1995-2000

Event	Avg. YPLL	Percent Deviation	Number	Percent Distribution
Mean	33.9	0.0%	30,110	100.0%
Excavation or trenching cave-in	40.7	20.0%	224	0.7%
Contact with overhead power lines	40.3	18.9%	725	2.4%
Contact with electric current of machine, tool, appliance, or light fixture	39.8	17.5%	246	0.8%
Contact with wiring, transformers, or other electrical components	39.1	15.4%	416	1.4%
Fall from building girders or other structural steel	39.1	15.4%	233	0.8%
Sinking, capsized water vessel	38.3	13.0%	160	0.5%
Inhalation in enclosed, restricted, or confined space	38.0	12.0%	160	0.5%
Fall from ship, boat, n.e.c.	37.2	9.7%	176	0.6%
Assaults and violent acts by person(s), n.e.c.	37.1	9.4%	153	0.5%
Caught in or crushed in collapsing structure	37.0	9.2%	207	0.7%
Fall from roof edge	36.5	7.8%	286	0.9%
Drowning, submersion	36.5	7.7%	329	1.1%
Ingestion of substance	36.4	7.3%	108	0.4%

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APPENDIX TABLE 3 continued

Event	Avg. YPLL	Percent Deviation	Number	Percent Distribution
Struck by swinging or slipping object, n.e.c.	36.3	7.2%	122	0.4%
Explosion, n.e.c.	36.2	6.9%	265	0.9%
Caught in running equipment or machinery	36.2	6.8%	831	2.8%
Pedestrian struck by vehicle, mobile equipment on side of road	36.1	6.6%	250	0.8%
Fire in residence, building, or other structure	35.7	5.2%	248	0.8%
Homicide - stabbing	35.5	4.8%	318	1.1%
Struck by dislodged flying object, particle	35.5	4.7%	149	0.5%
Homicide - shooting	35.4	4.4%	2,722	9.0%
Collision between vehicles, mobile equipment - moving and standing vehicle in roadway	35.2	3.8%	170	0.6%
Aircraft accident, n.e.c.	35.1	3.6%	558	1.9%
Exposure to environmental heat	35.1	3.5%	126	0.4%
Jack-knifed or overturned - no collision	34.9	3.0%	1,480	4.9%
Explosion of pressure vessel or piping	34.8	2.7%	208	0.7%
Fire, n.e.c.	34.6	2.1%	141	0.5%
Vehicle struck stationary object or equipment on side of road	34.5	1.9%	1,326	4.4%
Fall to lower level, n.e.c.	34.4	1.4%	616	2.0%

Continued on next page

APPENDIX TABLE 3 continued

Event	Avg. YPLL	Percent Deviation	Number	Percent Distribution
Fall from roof edge	36.5	7.8%	286	0.9%
Drowning, submersion	36.5	7.7%	329	1.1%
Ingestion of substance	36.4	7.3%	108	0.4%
Collision between vehicles, mobile equipment while moving in opposite directions	34.3	1.3%	1,213	4.0%
Caught in or compressed by equipment or objects, n.e.c.	34.3	1.3%	363	1.2%
Suicide	34.3	1.2%	935	3.1%
Pedestrian struck by vehicle, mobile equipment in roadway	34.3	1.1%	539	1.8%
Struck by object, n.e.c.	34.3	1.1%	107	0.4%
Aircraft accident, unspecified	34.2	0.8%	240	0.8%
Fall from scaffolding, staging	34.0	0.4%	471	1.6%
Collision between vehicles, mobile equipment while in an intersection	33.8	-0.3%	646	2.1%
Highway accident, unspecified	33.5	-1.1%	244	0.8%
Fall from roof, unspecified	33.5	-1.2%	212	0.7%
Collision between vehicles, mobile equipment while moving in the same direction	33.5	-1.3%	618	2.1%
Struck by falling object	33.2	-2.1%	1,985	6.6%

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APPENDIX TABLE 3 continued

Event	Avg. YPLL	Percent Deviation	Number	Percent Distribution
Vehicle struck stationary object or equipment in roadway	33.1	-2.2%	119	0.4%
Collision between vehicles, mobile equipment, unspecified	33.1	-2.3%	420	1.4%
Collision between railway vehicle and other vehicle	33.1	-2.3%	273	0.9%
Aircraft accident during takeoff or landing	32.5	-4.1%	286	0.9%
Ran off highway - no collision	32.4	-4.3%	218	0.7%
Fall from moving vehicle, mobile equipment - nonhighway	31.9	-5.9%	115	0.4%
Vehicle, mobile equipment struck stationary object - nonhighway	31.8	-6.1%	171	0.6%
Caught in or crushed in collapsing materials, n.e.c.	31.5	-7.0%	158	0.5%
Pedestrian struck by vehicle, mobile equipment in parking lot or non-roadway area	31.4	-7.3%	902	3.0%
Compressed or pinched by rolling, sliding, or shifting objects	31.1	-8.1%	304	1.0%
Fall from ladder	28.8	-15.0%	551	1.8%
Homicide - hitting, kicking, and beating	28.6	-15.7%	209	0.7%
Fall from nonmoving vehicle	28.5	-15.8%	272	0.9%
Struck by rolling, sliding objects on floor or ground level	27.6	-18.6%	410	1.4%
Overturned vehicle - nonhighway	26.9	-20.6%	1,149	3.8%
Fall to floor, walkway, or other surface	26.6	-21.4%	193	0.6%
Fell from and struck by vehicle, mobile equipment - nonhighway	25.7	-24.3%	351	1.2%
Assaults by animals, n.e.c.	23.4	-31.1%	148	0.5%

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Comparison of Fatal Occupational Injury Surveillance Systems Between the European Union and the United States

Fernando G. Benavides, MD, PhD,[1]* George L. Delclos, MD, MPH,[2] Sharon P. Cooper, PhD,[3] and Joan Benach, MD, PhD[1]

Background *Comparison of workplace injury statistics among countries is often problematic, mainly because work injury statistics are based on different national recording and notification systems.*
Methods *Definitions of fatal work-related injuries, identification of the reference population, and rates of fatal work-related injuries, from 1995 to 1998, were compared between the European Statistics on Accidents at Work (ESAW) and the United States (U.S.) Census of Fatal Occupational Injuries (CFOI).*
Results *Similar definitions for workplace fatalities were found, but CFOI is based on an active search, and ESAW on passive notification. Daily fatal occupational injury numbers were similar in both: about 17 workers die per day, but average annual work-related death rates were higher in the U.S.*
Conclusions *There are enough differences to allow direct comparisons between both systems. CFOI is likely to be more comprehensive than ESAW. It is conceivable that the true number of fatal occupational injuries in the European Union (E.U.) could be higher, and thus the apparent difference in U.S. and E.U. fatal injury rates may be an artifact of the different surveillance systems.* Am. J. Ind. Med. 44:385–391, 2003. *© 2003 Wiley-Liss, Inc.*

KEY WORDS: fatal work injury; fatality rates; work environment; global economy

INTRODUCTION

The assessment and comparison of workplace injuries among countries is often problematic, mainly because work injury statistics are based on different national recording and notification systems [ILO, 1996]. However, given economic global trends and an increasing number of trade agreements, that may contain provisions addressing health and safety issues, there is a need for comparable information systems that can allow the development of regional and global policies to prevent occupational injuries. This is crucial so that countries with weaker safety rules do not gain an unfair advantage over those with stricter regulations.

The International Labor Organization (ILO) recently estimated that annual crude work fatality rates averaged around 14 per 100,000 workers per year (335,000 deaths worldwide in 1994), ranging from 5.37 in established market economies (the United States of America, European Union, etc.) to 23.12 in Other Asia and island countries (Indonesia, Pakistan, Korea, etc.) [Takala, 1999]. Although workplace fatalities are somewhat more reliably reported than nonfatal occupational injuries, underreporting of the work-relatedness of events, differences in economic activity structures,

[1]Occupational Health Research Unit, Department of Health and Experimental Sciences, Pompeu Fabra University, Barcelona, Spain
[2]Southwest Center for Occupational and Environmental Health, The University of Texas School of Public Health, Houston, Texas
[3]Texas A&M School of Rural Public Health in Bryan, Texas
Contract grant sponsor: Spanish Science and Technology Ministry; Contract grant number: BSA2001-0865.
*Correspondence to: Fernando G. Benavides, Unitat de Recerca en Salut Laboral, Universitat Pompeu Fabra Doctor Aiguader, 80. 08003 Barcelona, Spain.
E-mail: Fernando.benavides@cexs.upf.es

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and inaccurate employment figures used were some of the main shortcomings identified by the ILO that can limit even comparisons of fatality rates. However, the ILO advocates these kinds of comparisons because, in addition to their need as economies become more global, they can also lead to improvements of national surveillance and information systems.

Within two of the most developed economic regions of the world, the United States (U.S.) and the European Union (E.U.), where these limitations might be less of a factor, workplace deaths continue to be a major public health problem [Herbert and Landrigan, 2000]. An appropriate comparison between both regions could provide useful insight towards improving global cooperation in the occupational health and safety arena [Schulte, 2002]. To our knowledge, no studies so far have compared both regions. The objectives of this article were to describe fatal work injury surveillance system characteristics, and to compare basic statistics between the U.S. and the E.U.

METHODS

The U.S. has two primary surveillance systems for recording work-related fatalities: the National Traumatic Occupational Fatalities (NTOF) surveillance system and the Census of Fatal Occupational Injuries (CFOI). Although both programs are complementary, CFOI was used in this study. The main advantage of CFOI is that it is based on multiple data sources, in contrast to NTOF, which relies only on the use of death certificates [Biddle and Marsh, 2002]. Beginning in 1992, the CFOI surveillance system is considered to be more complete and reliable, since it includes all fatal occupational injuries confirmed by at least two separate sources that document the work relationship of the fatality, such as state agency administrative reports, death certificates, and/or workers' compensation reports [Rosa et al., 2000]. In this study the number of fatal occupational injuries by sex, age, and industry was collected from the CFOI home page [Bureau of Labor Statistics, 2001].

Since 1994, the E.U. has produced the annual European Statistics on Accidents at Work (ESAW) report through EUROSTAT, a Directorate-General of the European Commission, to process and publish comparable statistical information at the European level, applying a harmonized methodology based on country sources [Eurostat, 2001c]. The data on fatal occupational injuries data used in this study were obtained from the EUROSTAT databases [Eurostat, 2001a].

Fatality crude rates by sex and age from 1995 to 1998 were calculated as deaths per 100,000 workers. This 4-year period was chosen because, at the time of the analysis, it was the only period common to both reporting systems. The fatality rates published by CFOI, based on employment data from the Current Population Survey as a denominator, were used. For the ESAW, fatality rates were recalculated using employment data from the Labour Force Survey [Eurostat, 2001b], since typically only rates adjusted for industrial sector are provided, and crude rates are not available.

Definitions of fatal work-related injury, with specification of inclusion and exclusion criteria, identification of the reference population and other surveillance system characteristics, were compared and contrasted between CFOI and ESAW.

Comparison by industrial sector was limited to construction and manufacturing, because of differences in the industrial classification schemes between the Standard Industrial Classification of the U.S. [Office of Management and Budget, 1987], and the Statistical Classification of Economic Activities of the E.U. [NACE, 1990] for other industrial sectors. Differences within these two industrial sectors were not considered, although this could be very relevant, especially in manufacturing. Thus, construction is a very simple sector with relatively few subgroupings. Manufacturing, on the other hand, is a complex sector with many branches (from manufacture of food to chemicals and machinery).

RESULTS

Information Systems

The CFOI and ESAW reporting systems have a very similar case definition for workplace fatality (Table I). Both include deaths occurring off company premises during working hours and during work where the vehicle is considered the work environment (i.e., road traffic injuries of a truck driver), although for some European countries, such as the United Kingdom and Ireland, these are excluded. Deaths occurring while commuting to or from work are also excluded by both systems.

Both ESAW and CFOI systematically exclude workplace deaths due to non-external causes, such as heart attacks or strokes, unless these were clearly preceded by a traumatic event.

However, there are some differences between the two systems. For example, many European countries do not include fatal work injuries that affect the self-employed (totally for Belgium, France, Portugal, Greece, and the Netherlands, and partially for Spain, Germany, and Finland), or for some public services workers (Belgium, Greece, Spain, France, Netherlands, and Portugal). In contrast, work-related deaths are collected across all industrial sectors in the United States, including the public and self-employed sectors.

In part, system differences in event counting are a consequence of the sources used by each system. The CFOI surveillance system is based on a comprehensive, active search of different sources, such as death certificates, workers' compensation, or state agency administrative

TABLE I. Definitions and Surveillance System Characteristics of Fatal Occupational Injuries in the United States (U.S.) and the European Union (E.U.)

Fatal occupational injuries	U.S.	E.U.
Agency	Bureau of Labor Statistics (BLS), Census of Fatal Occupational Injuries (CFOI)	EUROSTAT European Statistics on Accidents at Work (ESAW)
Established	1992	1994
Case definition	A death in which the decedent was working at the time of the event	A discrete occurrence in the course of work which leads to the death of the victim
Additional inclusion criteria	Occurring off the employer's premises but was there to work Engaged in work activity where the vehicle is considered the work environment (e.g., taxi, truck) Fatal heart attacks and strokes only if a traumatic work injury was a contributory cause of death	Occurring during work but off company premises Road traffic fatalities (i.e., truck drivers) except for Ireland and the United Kingdom
Exclusion criteria	Commuting deaths (to or from work) Deaths having only a medical origin (i.e., heart attacks at work or strokes)	Commuting deaths (to or from work) Deaths having only a medical origin (i.e., heart attacks at work or strokes) Work accidents which affect specific groups of employees in some countries[a]
Data sources	Active search for at least two reliable sources documenting the work relationship of the fatality: state agency administrative reports, death certificates, or workers' compensation and claim reports	Passive reporting under insurance schemes in eleven member countries and on labor inspectorate report in the remaining four countries
Reference population	An estimation of all civilian employees age 16 years and older from the Current Population Survey plus resident military figures from the Bureau of the Census	Employed persons age 15 years and over estimated through the European Labour Force Survey was used in this study[b]

[a]Self-employed workers are totally excluded in Belgium, Greece, the Netherlands, and Portugal; they are partially excluded in Spain, Germany, and Finland. Also excluded are some public services workers in Belgium, Greece, Spain, France, the Netherlands, and Portugal.
[b]Eurostat amended this figure to adjust numerator to denominator.

reports. On the other hand, ESAW is based mainly on passive notification linked to specific insurance schemes in 11 E.U. countries, and on labor inspection records for the 4 remaining member countries (Denmark, the Netherlands, United Kingdom, and Ireland).

The worker population used by CFOI, based on the Current Population Survey, includes all employed workers age 16 years and older, including government workers and military service workers residing in the U.S., which allows comprehensive estimates of rates. In this study, all employees age 16 years and over were used to estimate global rates, although when comparisons among European members are made by EUROSTAT, all self-employed workers in Belgium, Greece, the Netherlands, and Portugal are excluded, and partially excluded in Spain, Germany, and Finland. Workers from some public services in Belgium, Greece, Spain, France, the Netherlands, and Portugal are excluded.

Comparison of Statistics

The daily fatal occupational injury figures in the U.S. and the E.U. during the 1995–1998 period were similar: around 17 workers (14 men and 3 women) die every day as a consequence of their jobs. In terms of rates, a slightly decreasing trend was observed in both the U.S. and E.U., although rates were consistently higher in the U.S. than in the E.U. (Table II). The average annual work-related death rate for the study period was 4.7 per 100,000 workers in the U.S., and 3.8 in the E.U., or 24% higher in the former. With respect to differences by sex, fatality rates were 10-fold higher for men than women in the U.S., and 11-fold higher in the E.U. Rates among women during the study period were between 60 and 100% higher in the U.S. than in the E.U.

Age-related fatal injury rates were also similar in both regions (Fig. 1) in 1998, work-related fatality rates per 100,000 were lowest for workers under 25 years of age (3.1 in the U.S. and 2.9 in the E.U.) and highest for workers 65 years of age and over (14.3 and 9.5, respectively). Importantly, though, differences between the U.S. and E.U., by age group, progressively widened with increasing age, from approximately 7% for workers under 25 years of age to over 50% in those 65 years of age and over.

Specific fatality rates for the manufacturing sector were higher in the E.U. (varying from 4.2 in 1995 to 3.5 per 100,000 in 1998), than in the U.S. (from 3 to 3.3, respectively) (Fig. 2). However, during the same time period,

TABLE II. Total and Sex-Specific Fatal Work-Related Injuries in the U.S. and E.U. According to CFOI—BLS and EUROSTAT Definitions, 1995—1998

	U.S.			E.U.		
Year by sex	**Deaths**	**Employed[a]**	**Rates[b]**	**Deaths**	**Employed[a]**	**Rates[b]**
1995						
Total	6,210	126,248	5.0	6,229[c]	148,407	4.2
Male	5,676	68,556	8.0	5,341	86,855	6.1
Female	534	57,692	1.0	305	61,552	0.5
1996						
Total	6,112	127,997	4.8	5,549[c]	149,147	3.7
Male	5,605	69,329	8.1	5,124	86,824	5.9
Female	507	58,668	0.9	315	62,323	0.5
1997						
Total	6,218	130,810	4.8	5,579[c]	150,071	3.7
Male	5,743	70,769	8.1	5,135	87,206	5.9
Female	475	60,041	0.8	333	62,865	0.5
1998						
Total	6,026	132,684	4.5	5,476[c]	152,494	3.6
Male	5,544	71,744	7.7	5,022	88,542	5.7
Female	482	60,940	0.8	345	63,952	0.5

[a]In thousands.
[b]Fatality rate per 100,000 workers.
[c]Differences are due to cases where sex was not specified.

there was a steady decline in the E.U. rates, of approximately 20%, whereas rates in the U.S. remained relatively unchanged. Conversely, specific rates for the construction industry were consistently lower in the E.U. than in the U.S., with a progressively widening difference over the 4-year-period, since construction fatality rates decreased by 21% in the E.U. (from 13.8 to 11.4 per 100,000 workers), but varied little in the U.S. (from 15 to 14.5 per 100,000). Differences in fatal work-related injury rates between the manufacturing and construction sectors were greater in the U.S. The fatality

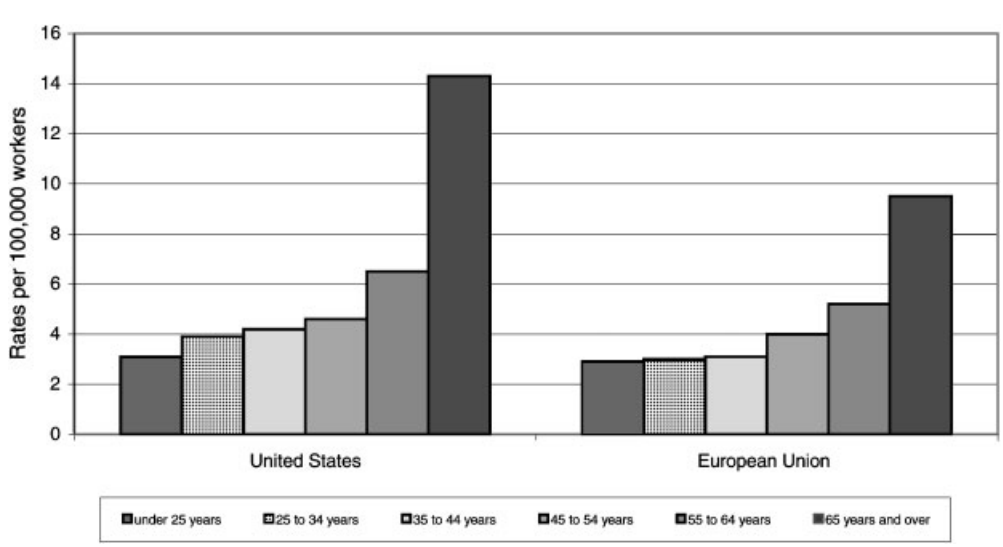

FIGURE 1. Fatal work-related injury rates per 100,000 workers in the United States Census of Fatal Occupational Injuries—Bureau of Labor Statistics (CFOI—BLS) and European Union (EUROSTAT) by age groups for 1998.

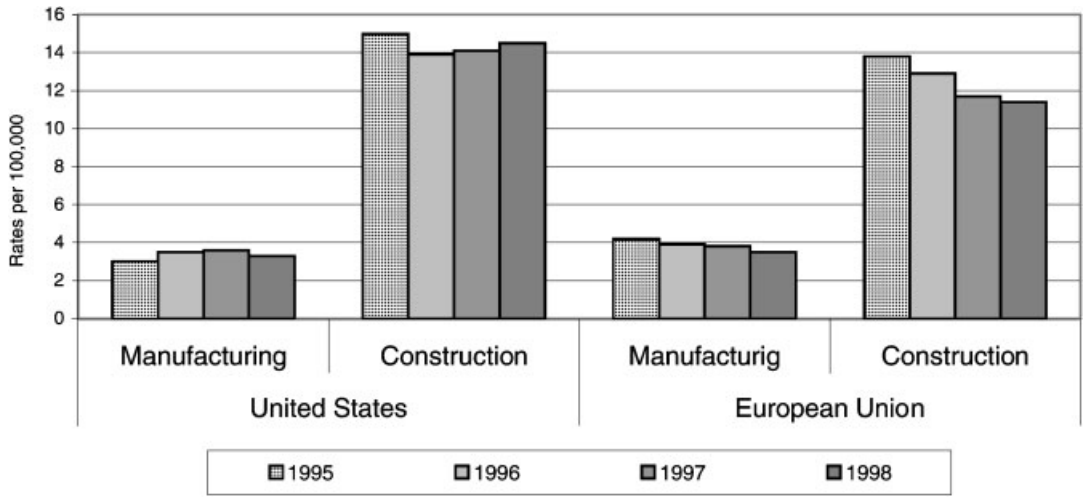

FIGURE 2. Fatal work-related injury rates per 100,000 workers in the United States (CFOI—BLS) and European Union (EUROSTAT) for selected sectors of economic activity, 1995—1998.

rate in the construction industry was approximately five times that in the manufacturing industry in the U.S., as compared to a 3-fold difference between the two sectors in the E.U.

DISCUSSION

This initial evaluation of data from two large fatal occupational injury surveillance systems in the U.S. and the E.U. revealed that there are important differences to be considered when conclusions from these kinds of comparisons are drawn. The most significant disparity may reside in the fact that CFOI is based on an active search of work-related injury deaths, where death certificates play an important role as a source of cases. This allows CFOI to identify work-related deaths in all workers, including self-employed and government workers. The ESAW system, on the other hand, is based on passive reporting from only one source, either social security claims or labor inspectorate reports, depending on the member state. This may signify that ESAW excludes all fatal occupational injuries occurring in workers not covered by social security health insurance schemes related to work injury, including many self-employed workers and civil servants (permanent government workers providing public services) in some European countries. Self-employment represents around 12% of the total employment in the E.U. [Eurostat, 2001b].

However, a clear, and critical, similarity between the CFOI and ESAW systems is the case definition of a fatal occupational injury that includes on-the-job traffic fatalities, with the exception of Ireland and the United Kingdom, and excludes deaths while commuting to and from work, as well as those resulting from non-traumatic events. The exclusion of motor vehicle occupational fatalities (which represent around 37.5% of all work-related fatalities in the entire E.U.) in Ireland and the United Kingdom may be another important source of underreporting [Dupré 2001].

Previous studies conducted in the U.S. have indicated that any single source is unlikely to capture all fatal occupational accidents. In a review that assessed effectiveness of source documents for identifying fatal occupational injuries, one of the weakest sources were state agency administrative reports, which showed a capture rate of only 32% [Stout and Bell, 1991]. The sensitivity of death certificates in identifying work-related fatal injuries has been reported as 77.6%, with a specificity of over 99% [Kraus et al., 1995]. We are unaware of any similar studies in the E.U., except for a recent study that detected an underreporting of nearly 10% for fatal occupational injuries in Spain, probably because they occurred days after injury date [Benavides et al., 2003]. These comparisons suggest that the CFOI system is likely to be more comprehensive than ESAW. Although a specific study to assess ESAW completeness for fatal work-related injuries is needed, our hypothesis is compatible with a recent study by the ILO, which estimated that in the E.U., about 3,000 occupational fatalities are missed each year. This estimate was applied to the totality of the employed population, including self-employed workers and civil servants [Takala, 1999].

Differences in completeness of reporting between the two systems could, in part, explain the high rates found in the U.S. in comparison with the E.U., although absolute numbers are quite similar, and the employed workforce in the E.U. is slightly larger than in the U.S. It is conceivable that the true number of fatal occupational injuries in the E.U. could be higher than that reported by ESAW. If, for example, the U.S. workplace fatality rate for 1998 (4.5 per 100,000) were applied to the E.U. employed workforce of the same year (n = 152,494,000), the number missed would be

approximately 1,386 fatal occupational accidents. Based on the aforementioned observations, a substantial portion of these missed occupational injury cases could have occurred among self-employed workers, civil servants not covered by social security systems, and uncounted motor vehicle occupational fatalities in Ireland and the United Kingdom.

An alternative argument could be that the working conditions in the U.S. are more dangerous than in the E.U., but the percentages of people working in construction and manufacturing (the only two common specific sectors in both) were higher in the E.U. (7.7 and 20.7%, respectively) than in the U.S. (6.5 and 15.6%, respectively) in 1998. A study of rates, adjusted for industrial sectors, is needed to explain these differences.

Age distribution differences are not likely to explain overall rate differences because the age distributions were very similar between the U.S. and the E.U. workforce: those under 25 years comprised 15.1 and 11.4% of workers, respectively, while those 65 years and over were 1.3 and 2.8%, respectively.

Despite these differences, both surveillance systems showed a slightly decreasing trend in rates over the study period. Previous studies have reported similar trends. In the U.S., with NTOF data which is based only on death certificates, occupational injury mortality rates decreased annually by approximately 3.7% from 1980 to 1989 [Stout et al., 1996]; after adjusting for race, sex, and age and using a regression model, the annual decrease was 3.1% between 1983 and 1992 [Bailer et al., 1998]. Based on CFOI data, the rate declined overall by 7% between 1992 and 1997 [Rosa et al., 2000]. In the E.U., an overall decrease of more than 21% was reported between 1994 and 1999 [Eurostat, 2002].

In terms of demographic characteristics of workers, both surveillance systems show a similar pattern. The high-risk in men and in workers aged 65 years and older, as expected [Veazie et al., 1994], showed that both high-risk groups share a similar death rate distribution in the U.S. and in the E.U, although the higher work-related fatality rate among women in the U.S. should be further explored. A possible explanation could be homicide work fatality in the U.S. For several years, homicide has been the leading cause of workplace fatalities among women in the U.S. [Jenkins, 1996]. However, the higher fatality rate in the elderly in the U.S., in comparison with the E.U. could be due to a reporting bias, since in Europe there is a high percentage of self-employed workers 50 years of age or older (representing 27% of all self-employed workers).

The disparities in rates by age groups, which persist when examined further by sex, occupation, and economic activity, have been explained in terms of a decreased ability to survive injury, less dexterity, and also because older workers may be undercounted in the workforce [NIOSH, 1993]. The current ageing of the workforce in both the U.S. and the E.U. makes it urgent to further clarify the causes of the higher risk in older workers. It should also be noted that neither system includes rates for young adolescent workers, whose participation in the workforce has been increasing, at least in the U.S., and who may have higher fatality rates than adult workers [National Research Council, 1998]. More than 70 teenage workers are estimated to die from work-related injuries each year [Runyan and Zakocs, 2000].

Unfortunately, differences between economic activity classifications used in CFOI and ESAW only allowed a meaningful comparison for manufacturing and construction activities. Construction is well established as one of the highest risk activities in the U.S., together with agriculture/forestry/fishing, mining, and transportation. A similar situation exists in the E.U. On the other hand, manufacturing has had low fatality rates in both the U.S. and the E.U. However, fatal occupational injury rates were quite similar for manufacturing, but different for construction. The great similarity found in workplace fatality rates for manufacturing between both systems may be explained in terms of minor underreporting in this economic sector, possibly due to a smaller number of self-employed workers in these industries. This point, however, should be confirmed because the European Labor Force Survey does not provide a distribution of self-employed workers by economic sector [Eurostat, 1999]. Conversely, differences in the construction sector could be due to higher underreporting in this sector, as a consequence, at least in part, of the high number of self-employed workers. If so, the decrease in construction fatalities in the E.U. could be a reflection of the increasing number of self-employed workers in the sector. However, although shifts in the self-employed could partly explain the result, there could also be important differences in construction worker demographics or type of construction activities between the two regions that are not taken into account. Construction was the industry division with the greatest proportion of fatalities (18%) in the U.S. between 1980 and 1995 [Marsh and Layne, 2001].

In summary, direct comparisons of work-related fatality rates are complicated, but they can help to enhance data collection for fatal occupational injuries, a priority for both CFOI and for ESAW. Attempting these comparisons may, in and of themselves, stimulate greater interest in making the definitions and various criteria for data collection more similar. The extensive experience accumulated by CFOI, that builds on the previous experience with the NTOF [Division of Safety Research, 1998; MMWR, 1999] could be useful for ESAW, which could consider incorporating other sources, such as death certificates, to enhance collection of all fatal occupational injuries occurring in the E.U. Both systems might also consider formally addressing the comparability of the two reporting schemes, including harmonization of industrial classifications and occupational titles, which would allow a better understanding of differences in rates and

trends and, subsequently, improve targeting for intervention strategies. It is recognized that fatalities are only a starting point in improving occupational injury surveillance. Future comparisons should be expanded to include non-fatal work-related injuries that are more frequent, and have a different pattern by industrial sector. The move towards a new global society requires that attention be devoted not only to economic needs, but also to health and safety issues.

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Foreign-born workers: trends in fatal occupational injuries, 1996–2001

Workplace fatalities among foreign-born workers reflect the large influx of those workers into the U.S. workforce and their employment in occupations and industries with inherently higher risks of fatal injury

Katherine Loh
and
Scott Richardson

New immigrants who arrived in the United States during the 1990–2001 period accounted for 50.3 percent of the growth in the Nation's civilian labor force.[1] That is, one out of every two net new labor force participants during this period was a new foreign immigrant. Historically, Current Population Survey (CPS) figures show that foreign-born workers, who accounted for 1 in every 17 workers in 1960, increased their share of the labor force to one in eight by 2000.[2]

As the share of foreign-born employment has increased, so has the share of fatal occupational injuries to foreign-born workers. Yet, while the share of foreign-born employment increased by 22 percent from 1996 to 2000[3] the share of fatal occupational injuries for this population increased by 43 percent. This increase in fatal work injuries among foreign-born workers occurred at a time when the overall number of fatal occupational injuries to U.S. workers declined by 5 percent. As a result, the fatality rate for foreign-born workers has not mirrored the improvement seen in the overall fatality rate over this period. In 2001, the fatality rate for all U.S. workers decreased to a series low of 4.3 per 100,000 workers, but the fatality rate for foreign-born workers recorded a series high of 5.7 per 100,000 workers.

Foreign-born workers are disproportionately represented in occupations and industries with higher risks of fatality.[4] Lower levels of educational attainment and lack of English language proficiency may limit employment options for many foreign-born workers. The U.S. Census Bureau reported that in 2000 33 percent of the foreign-born population aged 25 and older did not have a high school diploma, compared with 13 percent of the native-born population.[5] And, according to the National Immigration Forum, more than 40 percent of new immigrants in 1990 stated that they did not speak English well.[6] These fractions are even higher among the Latin American foreign-born who represent about half of the foreign-born workers in the United States. Low educational attainment, lack of English proficiency, and other factors contribute to employment of many foreign-born workers in lower paying,[7] higher risk jobs.[8]

Methods

This study examines Bureau of Labor Statistics surveillance data from 1996 through 2001 to identify current trends in fatal work injuries among foreign-born workers. To classify the fatal work injury records for this study, we define the term "foreign-born" simply as persons not born in the United States. Persons born in Puerto Rico, Guam, the U.S. Virgin Islands, and other U.S. territories were not included in the foreign-born workplace fatality count. The foreign-born population includes legal immigrants, legal non-immigrants (for example, refugees and persons on student or work visas), and undocumented persons residing in the United States.

The Bureau of Labor Statistics conducts the Census of Fatal Occupational Injuries (CFOI) program, which collects detailed information on all work-related fatal injuries in the United States. Included are private wage and salary workers, public sector employees—both civilian and mili-

Katherine Loh is formerly an economist in the Office of Compensation and Working Conditions; and Scott Richardson is a program manager in the same office, Bureau of Labor Statistics. E-mail: Richardson.Scott@bls.gov.

tary—and self-employed workers. To ensure a complete count and to collect the required data for each case, a multiple source document collection system is employed. Each fatality is verified using at least two source documents, such as death certificates, medical examiners or coroner reports, State and Federal Workers' Compensation fatality reports, news media accounts, Occupational Safety and Health (OSHA) reports, or other sources. Historically, each fatality has averaged nearly four source documents. More than 30 data elements are collected through the CFOI program. Included in the results are demographic data such as the work status of the decedent (wage or salary worker, or self-employed), gender, age, and race or ethnic origin, and employment data, such as occupation and industry. Other data elements include the event or exposure that led to the injury, the source of the injury, and the activity and location of the worker during the time of the incident.

This study includes all fatal occupational injuries recorded by CFOI for which the element ("foreign birth place") was positively coded by the entry of the name of the country of birth into the field. For some records, only the region of origin was known, in which case that region was coded. "Unknown/not reported" cases were those in which the "foreign birth place" field was positively coded, but the precise country or region of origin was not clear from the narrative entry. Such cases were also included in the overall foreign-born worker fatality count. The foreign birth place narratives were then alphanumerically coded into country variables, or into general regional variables (for example, Asia, Africa, Europe, Latin America, Oceania, and Northern America) according to Census Bureau classifications for country and regional analysis.[9]

All fatality rates are expressed as number of fatalities per 100,000 employed persons. Because the fatality census does not collect employment data, fatality rates were calculated using estimates of employed civilian workers (aged 16 and older) from the CPS combined with resident military figures obtained from the Department of Defense. The CPS is a monthly random sample of 60,000 households that represents the entire noninstitutionalized civilian population of the United States. However, there are some limitations to these fatality rates: 1) the rates are based on employment regardless of hours worked; 2) the CPS classifies occupation based on the primary job worked, which may not be the job the decedent was performing when fatally injured; and 3) because the CPS is a survey rather than a census, data from the CPS are subject to sampling error. Also, CPS industry employment data were subdivided by major industry division for wage and salary workers, but not for self-employed workers. Due to this limitation, the industry fatality rates calculated for this study as well as all comparisons in the industry section (later presented) between shares of employment and shares of fatal work injuries refer only to foreign-born wage and salary workers (who account for 93 percent of all foreign-born workers).[10]

In addition, the CPS uses the Census Bureau definition of "foreign-born" and "native-born," which has a slightly different meaning than the definition employed by the CFOI. The Census Bureau defines foreign-born persons as those who were not U.S. citizens at birth, and "native-born persons" as those who were U.S. citizens at birth. The Census-defined native-born population includes persons who were born in one of the 50 States or the District of Columbia, persons born in one of the U.S. island territories, and persons born abroad to a U.S. citizen. According to the census in 2000, 0.7 percent of the U.S. population can be classified in the latter category of the native-born population, and as such, there may be slight inconsistencies in the nativity classification assigned to a fatally-injured worker by CFOI and by the CPS.[11] Some error may be introduced in the calculation of fatality rates due to this difference.

The 1987 Standard Industrial Classification (SIC) system is the basis for industry classifications for the CPS and the CFOI during the 1996–2001 period.[12] Occupations were classified according to the Bureau of the Census' 1990 Occupational Classification system. All injury characteristics (type of event, source of injury, part of body, and nature of injury) were classified using the Occupational Injury and Illness Classification structure developed by BLS.

Foreign-born worker fatalities

During 1996–2001, there were a total of 4,751 fatal work injuries involving foreign-born workers, accounting for 13 percent of the fatal occupational injuries recorded in the United States. Though foreign-born employment has increased both in number and as a share of total U.S. employment over this period, the foreign-born employment share has increased at a slower rate than the foreign-born share of occupational fatalities. (See table 1.) Even as fatal occupational injuries to all U.S. workers have declined, workplace fatalities to foreign-born workers have been on the rise. The fatality rate for foreign-born workers had a decreasing trend in the first half

Table 1. Fatal occupational injuries in the United States, 1996–2001

Year	All workers	Native-born	Foreign-born
Total	36,384	31,633	4,751
1996	6,202	5,474	728
1997	6,238	5,523	715
1998	6,055	5,402	653
1999	6,054	5,244	810
2000	5,920	5,069	851
2001	5,915	4,921	994

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001.

of the study period, but during the second half of the period, the rate increased from 4.3 in 1998 to 5.7 in 2001. (See chart 1.)

Fatal work injuries involving foreign-born workers were primarily concentrated in six States: California, Texas, Florida, New York, Illinois, and New Jersey. These six States also had the largest foreign-born populations. Sixty percent of all fatally-injured foreign-born workers were of Latin American origin, of which two-thirds were Mexican-born. In addition, 21 percent of foreign-born fatalities involved workers of Asian origin, and another 12 percent were of European origin.

Country and region of origin

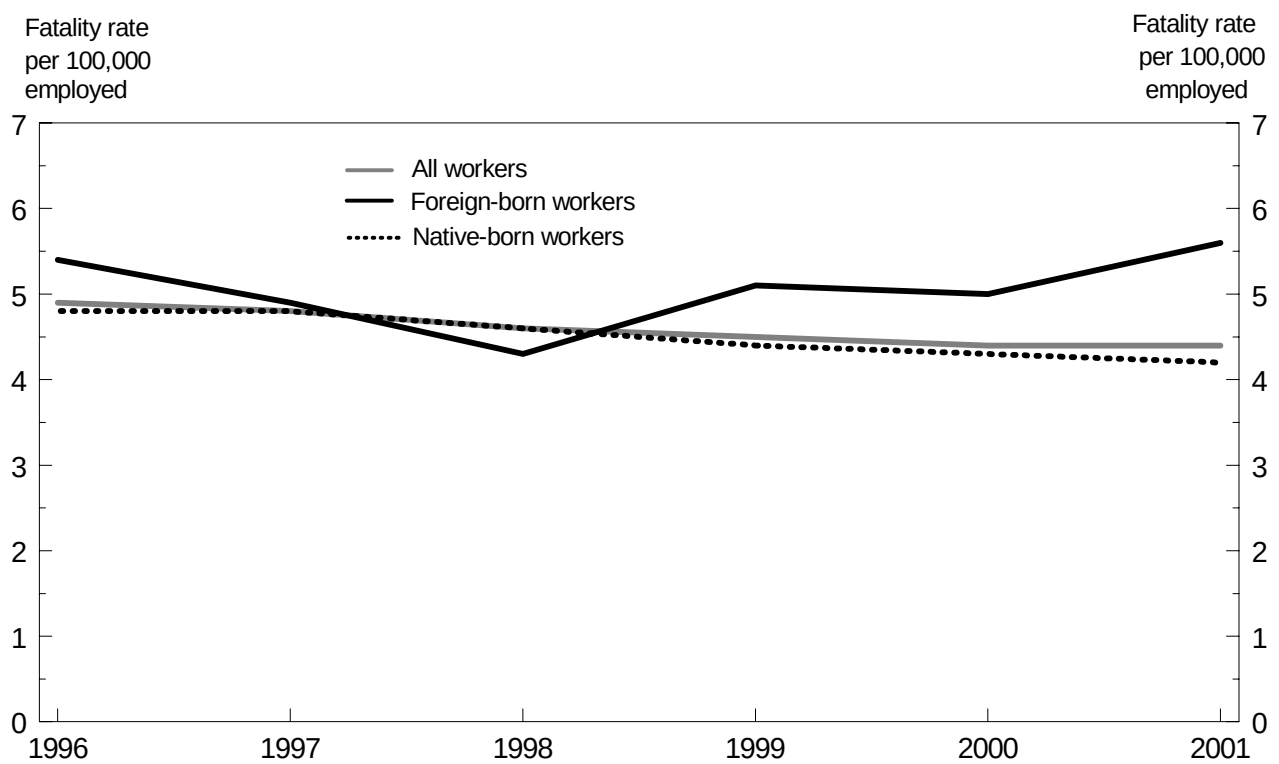
Region of origin The share of workplace fatalities borne by workers of each world region of origin generally resembled their employment shares in 2000 (the only year for which foreign-born employment data by region of origin are available), though some disparities were observed. (See table 2.)

Latin American-born workers, the largest group of foreign-born workers with respect to employment, also were the largest group of fatally-injured foreign-born workers with 60 percent, or 2,851 fatally-injured workers. About two-thirds of fatally-injured Latin American workers were born in Mexico. Mexican-born-worker fatalities as a share of total foreign-born worker fatalities (42 percent) in 2000 was disproportionately high relative to their share of foreign-born employment (27 percent) that year.

The second largest group of fatally-injured foreign-born workers was originally from Asia, with 21 percent (993) of all foreign-born worker fatalities over the 1996–2001 period. (See table 2.) European-born workers had the third largest share of occupational fatalities among foreign-born workers, with one in eight fatalities (591) to foreign-born workers, and African-born workers composed the fourth largest group of fatally-injured foreign-born workers, with 156 fatalities.

Country of origin. Sixty-four percent of all fatalities to foreign-born workers occurred to those originating from just 10 countries. (See table 3.) Mexican-born-worker fatalities alone accounted for 40 percent (1,915) of all fatalities to foreign-born workers, and fatal work injuries to Mexican-born workers were uniquely observed to trend upward over the duration of the 6-year period under analysis, increasing from a low of 241 fatalities in 1996 to 422 in 2001. Three of the other nine countries also were Latin American countries: Cuba (153 fatal work injuries), El Salvador (129), and Guatemala (104). Another three were Asian countries, including India (170), Korea (140), and Vietnam (125). Canadian-born workers were the

Chart 1. Fatality rate of U.S. workers by nativity, 1996–2001



sixth largest national group, with 125 fatalities. Poland and Germany, the 2 European countries among the 10, had 89 fatalities each.

Occupation

Among foreign-born workers, the four occupational groups with the highest fatality rates over the 1996-2001 period were transportation and material moving occupations with a rate of 22.1 per 100,000, handlers, equipment cleaners, helpers and laborers (17.1 per 100,000), protective services (11.4 per 100,000), and construction trades (11.3 per 100,000). Almost half of all fatally-injured foreign-born workers were employed in those four occupations.

The share of Mexican-born workers fatally injured in farming, forestry and fishing occupations was higher than the share for workers from all other regions of origin. Fatalities in that occupational group represented almost a quarter of all fatal injuries sustained by Mexican-born workers. Workers employed in two other occupational groups—handlers, equipment cleaners, helpers and laborers occupations and construction trades—represented another 41 percent of fatally-injured Mexican-born workers. Fatally-injured workers from all other Latin American countries (which include countries in Central America other than Mexico, in the Caribbean, and in South America) were most frequently employed as handlers, equipment cleaners, helpers, or laborers, followed by transportation and material movers, and workers in construction trades.

Fatally injured Asian-born workers were most frequently employed in sales occupations; transportation and material moving occupations; and executive, administrative, and managerial occupations. Three-quarters of all fatally injured African-born workers also were employed in the same three occupations, though fatalities among those employed in transportation and material moving occupations were more frequent than sales occupations. (See table 4.)

Overall, foreign-born workers experienced different patterns in fatality rates than native-born workers in certain occupational groups. Foreign-born workers in sales occupations and handler, equipment cleaner, helper, and laborer occupations consistently experienced a higher annual fatality rate than their native-born counterparts, although both groups experienced overall declining fatality rates during the 6-year period. The fatality rate of foreign-born workers in sales occupations decreased from 9.2 per 100,000 in 1996 to 6.1 per 100,000 in 2001 (with a low of 4.7 per 100,000 in 1998), and the rate of their native-born counterparts decreased from 2.8 per 100,000 to 2.0 per 100,000 (with a low of 1.9 per 100,000 in 1999 and 2000). In handler, equipment cleaner, helper, and laborer occupations, foreign-born workers' fatality rate decreased from 19.8 per 100,000 in 1996 to 16.6 per 100,000 in 2001 (with a low of 14.8 per 100,000 in 2000), and the rate for native-born workers went from 11.7 per 100,000 to 10.9 per 100,000 (with a high of 12.6 per

Table2. Share of foreign-born employment and fatalities to workers aged 16 or older by region of origin, 2000

Region of origin	Share of employment	Share of fatalities
Number	16,532,000	851
Percent	100	100
Latin America	51.6	61.2
Caribbean	9.6	7.4
Central America	34.9	48.5
Mexico	27.3	42.1
Other Central America	7.6	6.5
South America	7.1	5.3
Asia	26.0	22.2
Europe	14.1	10.7
Africa	2.6	3.2
Northern America	2.4	2.5

SOURCE: U.S. Bureau of the Census, March 2000, the Bureau of Labor Statistics Current Population Survey and Census of Fatal Occupational Injuries, 2000.

Table 3. Fatal occupational injuries to foreign-born workers by country of origin, primary State, and primary fatal event, 1996–2001

Country	Number	Percent	Primary States	Primary fatal event (percent in parenthesis)
Total	4,751	100	CA, TX	Homicides (25)
Mexico	1,915	40.3	CA, TX	Fall to lower level (19)
India	170	3.6	CA, TX	Homicide (65)
Cuba	153	3.2	FL	Homicide (29)
Korea	140	2.9	CA	Homicide (60)
El Salvador	129	2.7	CA	Fall to lower level (24)
Canada	125	2.6	CA	Highway incidents (28)
Vietnam	125	2.6	CA, TX	Homicide (37)
Guatemala	104	2.2	CA	Highway incidents (18)
Germany	89	1.9	—	Aircraft (17)
Poland	89	1.9	NY, IL	Falls to lower level (28)

NOTE: Dash indicates that there was no primary State within the specified category.

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001

Table 4. Percent distribution of fatal work injuries to foreign-born workers by occupation, region of origin, and overall foreign-born fatality rate, 1996–2001

Occupation	Total foreign-born	Latin America						Asia	Europe	Africa	North America	Overall foreign-born fatality rate
		Total	Caribbean	Central America			South America					
				Total	Mexico	Other Central America						
Number	4,751	2,851	397	2,257	1,915	342	197	993	591	156	125	5.1
Percent	100	100	100	100	100	100	100	100	100	100	100	...
Managerial and professional specialty	8.2	3.8	8.1	2.5	2.5	2.9	9.1	14.4	15.7	16.0	15.2	1.8
Executive, administrative, and management	5.5	2.5	5.3	1.8	1.7	2.6	4.6	10.7	9.3	11.5	6.4	2.7
Professional specialty	2.7	1.3	2.8	.7	.8	—	4.6	3.7	6.4	4.5	8.8	1.0
Technical, sales, and administrative support	14.7	6.2	20.7	3.5	3.0	6.1	8.6	40.4	10.2	29.5	11.2	3.5
Technicians and related support	1.4	.6	1.8	.4	.3	—	—	1.6	3.9	—	6.4	2.6
Sales	12.4	4.9	17.1	2.7	2.5	3.8	5.6	36.8	5.9	28.2	—	6.4
Administrative support, including clerical	1.0	.7	1.8	.4	.3	1.5	—	2.0	—	—	—	.5
Service	6.7	6.9	10.8	6.1	5.3	10.5	8.1	6.7	7.3	3.2	—	1.8
Private household	.3	.2	—	.3	—	—	—	—	—	—	—	.8
Protective service	1.9	1.9	3.8	1.6	1.1	4.1	—	1.8	1.7	—	—	11.4
Service, other	4.6	4.7	7.1	4.2	3.9	5.8	6.1	4.5	5.1	—	—	1.4
Precision production, craft, and repair	18.0	20.4	18.9	20.6	20.2	23.4	20.3	7.6	25.7	3.2	25.6	7.5
Mechanics and repairers	4.0	4.3	6.0	3.9	3.9	3.8	6.6	2.3	5.4	—	6.4	6.6
Construction trades	11.4	13.5	10.3	14.3	13.7	17.8	11.2	2.7	16.8	—	15.2	11.3
Other precision, production, craft, and repair	2.6	2.5	2.5	2.5	2.6	1.8	2.5	2.5	3.6	—	4.0	3.3
Operators, fabricators, and laborers	37.8	43.9	36.8	44.7	44.6	45.0	49.7	24.5	29.9	45.5	36.0	10.2
Machine operators, assemblers, and inspectors	3.9	5.0	3.5	5.4	5.4	5.0	4.1	2.3	2.7	—	—	2.0
Transportation and material moving	15.7	14.1	20.7	11.9	11.9	12.3	25.4	15.1	16.6	35.3	28.8	22.1
Handlers, equipment cleaners, helpers, and laborers	18.2	24.9	12.6	27.4	27.4	27.8	20.3	7.0	10.7	7.7	6.4	17.1
Farming, forestry, and fishing	13.0	18.0	3.8	21.8	23.8	10.5	3.6	4.5	6.9	—	8.8	14.8

NOTE: Dash indicates no data reported or data do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, Current Population Survey and Census of Fatal Occupational Injuries, 1996–2001.

100,000 in 1998). Among farming, forestry, and fishing occupations, native-born workers had a higher but roughly stable fatality rate throughout the 6-year period, compared with foreign-born workers. However, foreign-born workers' fatality rate rose from 12.6 per 100,000 to 19.5 per 100,000 during that period, approaching the native-born rate.

Industry

Private construction, retail trade, and transportation and public utilities were the three industries in which fatally injured foreign-born workers were most frequently employed. (See table 5.)[13] Nearly one in four fatally-injured foreign-born workers was employed in the construction industry. Another one in three was employed in either retail trade or transportation and public utilities. Of these three industries, two were also among the industries that had the highest rates of fatality among foreign-born workers—construction (17.3 per 100,000) and transportation and public utilities (15.2 per 100,000). Mining (with 30.4 per 100,000) and agriculture, forestry, and fishing (15.2 per 100,000) also had high fatality rates among foreign-born workers.

The employment distribution of fatally-injured foreign-born workers differed considerably when dissected by region or country of origin. Among fatally-injured Mexican-born workers, more than a third were employed in the construction industry. Another 23 percent were employed in the agriculture, forestry, and fishing industry, followed by manufacturing (11

percent). In contrast, the 936 fatally-injured workers who were born in Latin American countries other than Mexico were most frequently employed in construction, transportation and public utilities, and services. (See table 6.)

Among fatally-injured Asian-born workers, retail trade recorded the highest number of fatal work injuries, with almost one out of every two killed in that sector. Fatally-injured European-born workers and Northern American-born workers had similar employment distributions, with transportation and public utilities, construction, and services accounting for the highest numbers of fatalities. Fatally-injured African-born workers were heavily concentrated in two industries, with more than 70 percent employed in either transportation and public utilities or retail trade. (See table 6.)

Overall, the share of fatal work injuries to foreign-born workers grew in those industries in which their share of employment also grew. However, in particular industries, there were notable disparities between foreign-born workers' share of employment and share of fatal work injuries. Whereas foreign-born workers' share of total agriculture, forestry, and fishing employment varied little around an average of 28 percent, their share of fatal work injuries rose by 60 percent, from one in five agriculture, forestry, and fishing fatalities in 1996 to one in three in 2001. In manufacturing, foreign-born workers' share of employment increased by 22 percent, from 13 percent in 1996 to 16 percent in 2001, but their share of workplace fatalities increased by 46 percent over the same period, from 9 percent to 14 percent. In other industries, specifically construction, transportation and public utilities, and retail trade, foreign-born workers' share of fatalities was consistently higher than their share of employment over the 6-year period. (See chart 2.)

Table 5. Percent distribution of fatal occupational injuries by industry and nativity, 1996–2001

Industry	All workers	Native-born	Foreign-born
Number	36,384	31,633	4,751
Percent	100	100	100
Agriculture, forestry, and fishing	13.1	13.1	12.8
Mining	2.5	2.7	1.2
Construction	19.0	18.2	24.0
Manufacturing	11.4	11.8	9.2
Transportation and public utilities	15.9	16.0	14.9
Wholesale trade	3.9	4.0	3.1
Retail trade	9.8	8.6	18.0
Finance, insurance, and real estate	1.6	1.6	1.4
Services	12.5	12.6	12.0
Government	9.9	10.9	2.9

SOURCE: Bureau of Labor Statistics, Current Population Survey, and Census of Fatal Occupational Injuries, 1996–2001.

Event or exposure

Workplace homicide was the leading manner of traumatic work-

Table 6. Percent distribution of fatal occupational injuries to foreign-born workers by industry and region of origin, 1996–2001

Industry	Total foreign-born	Latin America						Asia	Africa	Europe	North America
		Total	Caribbean	Central America			South America				
				Total	Mexico	Other Central America					
Number	4,751	2,851	397	2,257	1,915	342	197	993	591	156	125
Percent	100	100	100	100	100	100	100	100	100	100	100
Agriculture, forestry, and fishing	12.8	17.8	4.0	21.4	23.4	9.9	4.1	4.3	6.8	—	9.6
Mining	1.2	1.6	—	2.0	2.2	—	—	—	—	—	—
Construction	24.0	31.4	16.4	34.2	34.2	34.2	28.9	5.3	26.1	3.8	20.0
Manufacturing	9.2	10.4	7.8	11.0	11.0	11.1	8.1	5.8	10.3	4.5	8.8
Transportation and public utilities	14.9	11.9	19.6	9.3	8.5	14.0	25.4	15.2	19.3	37.2	31.2
Wholesale trade	3.1	3.4	3.0	3.7	3.4	5.0	—	2.6	3.0	—	—
Retail trade	18.0	9.2	22.4	6.5	6.3	7.3	13.7	47.6	9.8	34.0	4.8
Finance, insurance, and real estate	1.4	1.2	3.3	.8	.8	—	—	2.0	1.9	—	—
Services	12.0	11.0	17.9	9.4	8.4	15.5	14.7	13.4	13.2	10.3	16.8
Government	2.9	1.6	4.0	1.2	1.4	—	—	3.2	8.8	—	—

NOTE: Dash indicates no data reported or data do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001.

Chart 2. Foreign-born wage and salary workers aged 16 and older, as a share of total employment and total fatal work injuries, by industy, 1996–2001

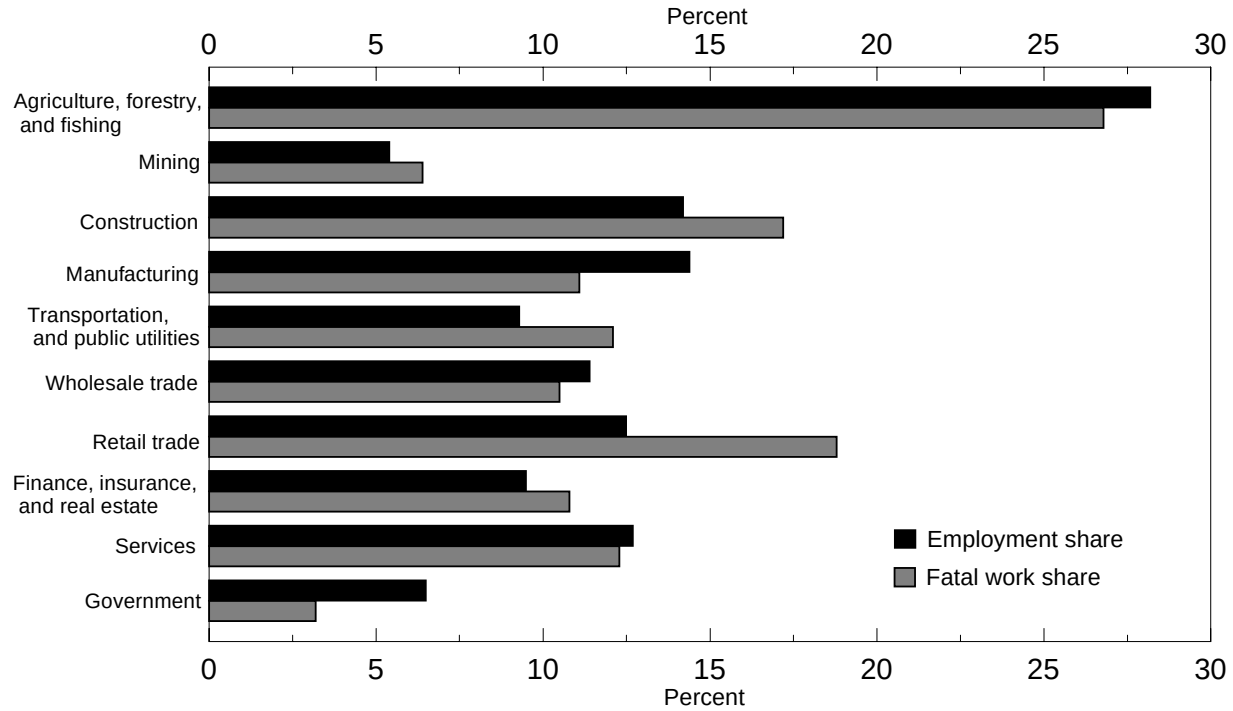


Table 7. Percent distribution of fatal occupational injuries by event and nativity, 1996–2001

Event	All workers	Native-born	Foreign-born
Number	36,384	31,633	4,751
Percent	100	100	100
Transportation incidents	42.8	44.8	29.3
Highway incidents	23.2	24.6	13.9
Pedestrian struck by vehicle, mobile equipment	6.2	6.2	6.3
Nonhighway incidents	6.1	6.5	3.5
Assaults and violent acts	16.4	14.7	28.4
Homicides	12.3	10.5	24.5
Self-inflicted injury	3.6	3.6	3.3
Contact with objects and equipment	16.5	16.6	15.2
Struck by object	9.3	9.5	8.0
Caught in or compressed by equipment or objects	4.8	4.7	4.9
Falls	12.0	11.4	16.0
Falls to lower level	10.7	10.0	15.0
Exposure to harmful substance or environments	8.7	8.8	8.4
Electrocution	4.8	4.8	4.3
Fires and explosions	3.2	3.3	2.6

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001.

place death for foreign-born workers, accounting for one out of every four fatal injuries. The second and third most frequent types of fatal events involving foreign-born workers were falls to a lower level (15 percent) and highway incidents (14 percent). The distribution of fatal events for foreign-born workers was different than the distribution of fatal events for all U.S. workers. (See table 7.) Overall, U.S. workers were far more likely to be fatally-injured in highway incidents (23 percent), followed by homicides (12 percent) and fatal falls to a lower level (11 percent).

The 1,166 workplace homicides involving foreign-born workers represented about a quarter of the total recorded for all U.S. workers over the study period. One contributing factor in this high incidence of work-related homicide is the fact

that the foreign-born population is overwhelmingly concentrated in metropolitan areas,[14] which have three times the violent crime rate of rural areas.[15] Among the foreign-born, workers born in Mexico recorded the highest number of fatal workplace assaults, though fatal assaults represented only about 10 percent of the fatal events for Mexican-born workers. Workplace homicide was the primary fatal event for workers born in India, Cuba, Korea, and Vietnam. (See table 8.)

Falls to a lower level, the second most frequent type of fatal event for foreign-born workers, accounted for 714 fatal injuries. The number of fatal falls to a lower level involving foreign-born workers increased every year from 1997 to 2001, and the total for 2001 represented a 73-percent increase over the total recorded in 1997. The highest number of fatal falls to a lower level (3 in 10) involved falls from roofs. Another 19 percent were falls from scaffolding or staging, and 14 percent were falls from ladders. Half of the foreign-born workers who were killed by falls to a lower level (359) were born in Mexico, and this fatal event was the leading manner of traumatic workplace death for Mexican-born workers over the study period.

Highway incidents accounted for 657 fatal events or 14 percent of the fatal incidents involving foreign-born workers over the study period. The number of highway-related fatalities also increased, rising from a low of 84 fatalities in 1997 to a high of 148 in 2001. Highway incidents were the most frequent type of fatal event for workers born in Canada and Guatemala.

A total of 381 workers (8 percent) were killed as a result of being struck by an object, primarily falling objects, and another 298 workers (6 percent) were killed as a result of being struck by a vehicle or mobile equipment. For both of these fatal events, the percentage of fatalities for foreign-born workers was about the same as for all U.S. workers.

Clearly, the type of fatal events involving foreign-born workers varied according to the decedent's country and region of origin. The primary fatal event for workers originally from Asia or Africa was homicide, and the primary fatal event of Latin American-born workers was falls to a lower level. The primary fatal events of European- and Canadian-born work-

Table 8. Number and percent of fatal work injuries to foreign-born workers by country of origin (100 or more fatal injuries) and selected events, 1996–2001

Country	Number	Percent	Selected fatal event (percent)		
			Highway incidents	Falls to a lower level	Homicides
All U.S. workers	36,384	100	23	11	12
All foreign-born workers	4,751	100	14	15	25
Mexico	1,915	100	16	19	10
India	170	100	14	5	65
Cuba	153	100	10	14	29
Korea	140	100	9	5	60
El Salvador	129	100	10	24	19
Canada	125	100	28	14	6
Vietnam	125	100	10	10	37
Guatemala	104	100	18	16	14

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001.

Table 9. Fatal occupational injuries to foreign-born workers by region of origin, primary State, and primary fatal event, 1996–2001

Region of origin	Number	Percent	Primary States	Primary fatal event (percent in parenthesis)
Total	4,751	100	CA, TX, FL	Homicide (25)
Latin America	2,851	60.0	CA, TX, FL	Fall to lower level (18)
Caribbean	397	8.4	FL, NY	Homicide (39)
Central America	2,257	47.5	CA, TX	Fall to lower level (19)
Mexico	1,915	40.3	CA, TX	Fall to lower level (19)
South America	197	4.1	NY, FL	Fall to lower level (22)
Asia	993	20.9	CA, TX	Homicide (55)
Europe	591	12.4	NY	Fall to lower level (18)
Africa	156	3.3	—	Homicide (59)
Northern America	125	2.6	—	Highway incidents (28)
Oceania	18	.4	—	—

NOTE: There were 17 fatally-injured foreign-born workers whose country of origin was unknown or not reported. Dash indicates that there was no primary State or event within the specified category.

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001.

ers were falls to a lower level and highway incidents, respectively. (See table 9.)

Demographics

Employee status. Over the 6-year study period, 3,875 fatalities to wage and salary foreign-born workers were recorded, or 82 percent of all fatalities to foreign-born workers. This worker group experienced a fatality rate of 4.5 per 100,000—15 percent higher than that of native-born workers (3.9 per 100,000). Self-employed workers composed 18 percent (876) of all fatally-injured foreign-born workers, and had a fatality rate of 12.8 per 100,000—13 percent higher than the rate for native-born workers similarly employed.

Gender. The three most frequent fatal events for male foreign-born workers were homicides (23 percent), falls to lower level (16 percent), and highway incidents (14 percent). Among female workers, nearly half of all workplace fatalities were due to homicide. Highway incidents (16 percent) and struck by vehicle or mobile equipment (7 percent) were the second and third most frequent fatal events for foreign-born women. These differences in event patterns reflect, in part, the varying employment patterns between foreign-born men and women and thus varying occupational dangers facing them. Female workers are more concentrated in technical, administrative, and sales occupations and service occupations and in retail trade and services industries—industries known to have higher risk of workplace homicide.[16]

Age. Overall, about 40 percent of fatally-injured foreign-born workers were under 35 years of age, compared with 30 percent for native-born workers, reflecting differences in the age distributions of the two populations. Within the foreign-born population, the Latin American-born segment had a median age of 32.6, according to the U.S. Census Bureau, and nearly one out of every two fatally-injured Latin American-born workers was under age 35. However, only one in four fatally injured European-born workers was under 35, reflecting an older population whose median age was 50.0.[17]

State and Census-designated region

State. Fatal work injuries in 6 States accounted for 64 percent (3,048) of all fatalities to foreign-born workers. As mentioned earlier, those states—California, Texas, Florida, New York, Illinois and New Jersey—were also the 6 states with the largest foreign-born populations.[18] Nearly 3 out of every 10 workplace fatalities in California and New York were incurred by foreign-born workers. Fatal injuries to foreign-born workers accounted for a quarter of all fatal occupational injuries sustained by workers in Florida, and in Texas, that figure was one in five.

California recorded the highest number of fatalities to foreign-born workers (1,037). One out of every five fatalities to foreign-born workers occurred in California over the study period. (See table 10.) More than a third of all fatal work injuries to foreign-born workers in the agriculture, forestry, and fishing industry occurred in California. The region of origin of foreign-born workers with the highest number of fatal work injuries was Latin America, with 70 percent, or 727 fatalities, of which 617 of those were from Mexico. Workers originally from Asia were the second largest regional group, with 230 fatal work injuries, or 22 percent, of the foreign-born worker fatalities in California.

Census-designated region. Even though the South did not possess the largest share of foreign-born workers, it held the largest share of foreign-born worker fatalities, with 37 percent of all fatalities to foreign-born workers over the 6-year study period. This fact is partially the result of the South's geographical proximity to two of the major contributors of foreign-born workers to the United States—Mexico and Cuba. The West had the second largest number of foreign-born worker fatalities, with almost 1,600 fatalities, 65 percent of which occurred in California alone. Fatal work injuries in the agriculture, forestry, and fishing industry were the primary contributor to the fatality count for foreign-born workers in the West. (See table 11.)

Table 10. Fatal occupational injuries to all workers and foreign-born workers by State and primary country of origin, 1996–2001

State	All workers	Foreign-born (percent of total in parenthesis)	Primary country of origin (percent in parenthesis)
California	3,588	1,037 (29)	Mexico (59)
Texas	3,072	643 (21)	Mexico (68)
Florida	2,125	514 (24)	Cuba (24), Mexico (21)
New York	1,518	464 (31)	Dominican Republic (12)
Illinois	1,363	212 (16)	Mexico (41)
New Jersey	652	178 (27)	Mexico (9)

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001.

Table 11. Fatal occupational injuries to foreign-born workers by region, State, primary industry, and primary fatal event, 1996–2001

Region and State	Number	Primary industry (percent in parenthesis)	Primary fatal event (percent in parenthesis)
Northeast	862	Construction (25)	Homicides (32)
New York	464	Construction (26)	Homicides (40)
New Jersey	178	Construction (30)	Falls to lower level (24)
Midwest	519	Retail trade (23)	Homicides (29)
Illinois	212	Construction (21)	Homicide (28)
South	1,773	Construction (31)	Homicides (24)
Florida	514	Construction (23)	Homicides (26)
Texas	643	Construction (35)	Homicides (23)
West	1,584	Agriculture, forestry, and fishing (20)	Homicides, highway incidents (both 20)
California	1,037	Agriculture, forestry, and fishing (22)	Homicides (24)

NOTE: A total of 13 work-related fatalities occurred in areas that were not attributable to a specific State or region, and are therefore not included in the areas above.

SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 1996–2001

Table 12. Relative risk of fatal occupational injury among all civilian workers aged 16 and older, by occupation and nativity, 1996–2001

[All workers = 1.00]

Occupation	All workers	Native-born	Foreign-born
Total	1.00	0.99	1.11
Managerial and professional specialty	.36	.36	.38
Executive, administrative, and management	.46	.45	.59
Professional specialty	.27	.27	.23
Technical, sales, and administrative support	.39	.35	.76
Technicians and related support	.86	.89	.57
Sales	.57	.48	1.40
Administrative support, including clerical	.12	.12	.12
Service	.58	.62	.39
Private household	.16	.15	.18
Protective service	2.45	2.45	2.48
Service, other	.30	.30	.30
Precision, production, craft, and repair	1.68	1.69	1.64
Mechanics and repairers	1.42	1.42	1.43
Construction trades	2.38	2.37	2.47
Other precision, production, craft, and repair	.98	1.03	.73
Operators, fabricators, and laborers	2.55	2.61	2.23
Machine operators, assemblers, and inspectors	.64	.69	.45
Transportation and material moving	4.99	5.01	4.82
Handlers, equipment cleaners, helpers, and laborers	2.73	2.54	3.74
Farming, forestry and fishing	5.45	6.01	3.24

SOURCE: Bureau of Labor Statistics, Current Population Survey, and Census of Fatal Occupational Injuries,1996–2001.

Fatality risk

The relative fatality risk for a group of workers is calculated as the fatality rate for that group divided by the fatality rate for all workers.[19] Relative risk measures how much the workplace fatality rate of a specific worker group differs from the workplace fatality rate of all workers.

The foreign-born workforce as a whole experienced a relative fatality risk of 1.11, compared with the relative risk of 0.99 for native-born workers. It is specifically the impact of a few occupations—specifically sales occupations and handler, equipment cleaner, helper, and laborer occupations—that contribute to the difference between the overall workplace fatality experience of foreign-born workers and native-born workers. (See table 12.)

Perhaps the most telling frame of the foreign-born labor scene is the fatality rates and relative risks of foreign-born workers by their regions of origin. (See table 13.) If the numbers from the year 2000 are a representative snapshot of the foreign-born workforce and their collective workplace environment, then a significant point arises. Based on 2000 census and CFOI data, the occupational risks to foreign-born workers were shared unevenly by workers of different regional groups.[20] Reflecting occupational patterns as well as other factors, workers from Latin America, Africa, and Northern America had fatality rates higher than the overall rate of 4.3 per

Table 13. Fatality rate and relative risk by region of origin for foreign-born workers aged 16 or older, 2000

Region of origin	Fatality rate	Relative risk
All workers	4.36	1.00
Total foreign born	5.14	1.18
Latin America	6.10	1.40
Caribbean	3.97	.91
Central America	7.14	1.64
Mexico	7.92	1.82
Other Central America	4.37	1.00
South America	3.85	.88
Asia	4.39	1.01
Europe	3.92	.90
Africa	6.21	1.42
Northern America	5.22	1.20

SOURCE: U.S. Census Bureau, 2000; Bureau of Labor Statistics Current Population Survey, and Census of Fatal Occupational Injuries, 2000.

100,000 for all U.S. workers in 2000.

Among Latin American-born workers, Mexican-born workers faced a fatality rate of 7.92 per 100,000, and a relative risk of 1.82. Mexican-born workers experienced a higher relative fatality risk than workers originally from the Caribbean, South America, or even other countries within Central America. Mexican-born workers represented 42 percent of fatal work injuries to foreign-born workers in 2000, but only 27 percent of total foreign-born employment that year.

Conclusion

The upward trend in workplace fatalities among foreign-born workers over the 1996–2001 period reflects the large influx of foreign-born workers, many of whom obtained employment in occupations and industries with inherently higher risks of fatal injury. Several factors are relevant to this observation, including lower levels of educational attainment among Latin American-born workers, who compose 60 percent of total foreign-born population aged 25 and older, lower levels of English proficiency, and the concentration of the foreign-born population in metropolitan areas.[21]

In light of this information, in particular, the relative risk of foreign-born workers by their regions of origin, future research could examine the workplace situation of these workers, with a special emphasis on Mexican-born workers. Detailed employment data at the country-specific level and documented over several years could be used to assemble a more complete and comparative profile of foreign-born workers and Mexican-born workers relative to the U.S. workforce as a whole. Industry employment data by employee status (class of worker) also would be beneficial to the study of foreign-born-worker fatalities. Finally, nonfatal injury data would be useful in composing a clear picture of the overall workplace safety landscape of foreign-born workers. □

Notes

[1] See Andrew Sum, and others, "Immigrant Workers and the Great American Job Machine: The Contribution of New Foreign Immigration to National and Regional Labor Force Growth in the 1990s," (Northeastern University, Center for Labor Market Studies, August 2002). This study includes in its definition of foreign-born population those persons born in Puerto Rico, Guam, and the U.S. Virgin Islands, contrary to the U.S. Census Bureau practices. Although they do raise the number of new foreign immigrants, their inclusion, as stated by the study's authors, "does not have a large effect on overall estimates of the number of new foreign immigrants arriving in the U.S. during the 1990–2000 period, since they…[accounted] for only 2.7% of the total number of new foreign immigrants."

[2] See Abraham T. Mosisa, "The Role of Foreign-born Workers in the U.S. Economy,"*Monthly Labor Review*, May 2002, pp. 3–14, available on the Internet at w**ww.bls.gov/opub/mlr/2002/05/contents.htm**.

[3] Foreign-born employment figures stated and used in fatality rate calculations throughout the article, except those detailing region of origin, were derived from unpublished employment tables from the Current Population Survey (CPS). The CPS is a monthly survey conducted by the Bureau of the Census for the Bureau of Labor Statistics. The data on foreign-born employment by region of origin were obtained from the U.S. Census Bureau. For more information, see A. Dianne Schmidley, "Profile of the Foreign-born Population in the United States: 2000," *Current Population Reports* Series P23-306 (Washington, DC, U.S. Census Bureau, December 2001). The report can also be found on the Internet at: **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

[4] See Scott Richardson and others, "Hispanic Workers in the United States: An Analysis of Employment Distributions, Fatal Occupational Injuries, and Non-fatal Occupational Injuries and Illnesses," in *Safety is Seguridad* (Washington, DC, National Research Council of the National Academies, 2003).

[5] See Mosisa, Abraham, "The role of foreign-born workers in the U.S. economy," *Monthly Labor Review*, May 2002, pp. 3–14 and Schmidley, "Profile of the Foreign-born Population," 2001, **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

[6] See Gregory Rodriguez, "From Newcomers to New Americans: The Successful Integration of Immigrants into American Society" (Washington, DC, National Immigration Forum, July 1999).

[7] See Mosisa, "Role of foreign-born workers," 2002 and Schmidley, "Profile of the Foreign-born Population," 2001, **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

[8] See Richardson and others, "Hispanic Workers in the United States," 2003.

[9] For a complete listing of world regional classifications, please see the code list developed by the U.S. Census Bureau, available online at **http://www.census.gov/acs/www/UseData/CodeList/ACS/2000/Pob.htm**.

[10] For more information about the CPS, please visit the CPS page on the BLS Web site at **www.bls.gov/cps**.

[11] On the Internet at: **http://www.census.gov/population/socdemo/foreign/ppl-145/tab01-1.pdf**.

[12] Because these data cover the 1996–2001 period, they are not affected by the conversion to the North American Industry Classification System (NAICS).

[13] Figures stated in this section for the number or percent distribution of fatal work injuries to foreign-born workers represent both wage and salary workers and self-employed workers. However, due to the limitation of the employment data available from the CPS, fatality rates in this section are calculated for wage and salary workers only. Likewise, comparisons drawn in this section between foreign-born shares of employment and shares of fatal work injuries are also stated for wage and salary workers only. Wage and salary workers account for 93 percent of all foreign-born workers.

[14] See Schmidley, "Profile of the Foreign-born Population," 2001, **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

[15] See Sonia M. Pérez, "Beyond the Census: Hispanics and an American Agenda," (Washington, DC, National Council of La Raza, August 2001), available on the Internet at **http://www.nclr.org/policy/census/census_report01_part_I.pdf**.

[16] For more information on workplace assaults, please see Scott Richardson and Janice Windau, "Fatal and nonfatal assaults in the workplace, 1996 to 2000," *Clinics in Occupational and Environmental Medicine*, vol. 3, 2003, pp. 673–89.

[17] See Schmidley, "Profile of the Foreign-born Population," 2001, **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

[18] See Schmidley, "Profile of the Foreign-born Population," 2001 **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

[19] For example, suppose the fatality rate over a given period for all workers in all occupations is 5.0. If the fatality rate for all workers employed in occupation X over the same period is 10.0, then the relative risk of fatality for workers in that occupation is 10.0/5.0 = 2.0. In other words, the fatality rate of workers employed in occupation X is twice as high as the fatality rate for all workers. As another example, suppose the fatality rate for foreign-born workers in occupation X is 12.0. Then their relative risk is 12.0/5.0 = 2.4.

[20] Foreign-born employment data detailing occupational employment by world region of origin were obtained from the U.S. Census Bureau, and can be found in the additional tables accompanying Schmidley, "Profile of the Foreign-born Population," 2001 at **http://www.census.gov/population/socdemo/foreign/ppl-145/tab16-1A.pdf**.

[21] See Schmidley, "Profile of the Foreign-born Population," 2001, **http://www.census.gov/prod/2002pubs/p23-206.pdf**.

The alignment of columns in table 4 was adjusted on February 28, 2005.

Work-related multiple-fatality incidents

Multiple-fatality work-related incidents claim the lives of 1 out of 10 fatally injured workers and include some of the worst occupational catastrophes: air crashes, bombings, fires, and explosions; using multiyear data, the Bureau of Labor Statistics takes a first-time-ever look at this infrequently occurring phenomenon

Dino Drudi
and
Mark Zak

Nine out of every 10 fatally injured workers die in an incident in which they are the only decedent. In these instances, there is one fatal incident and one fatality associated with it. But for the remaining 10 percent of worker fatalities, the fatal incident claimed the lives of more than one worker. These incidents are of particular interest to safety professionals and hazard researchers because the prevention of each such incident translates into the preservation of multiple lives.

The Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI)[1] identified 1,109 instances in which two or more workers died of injuries sustained in the same job-related incident during the 1995–99 period. These incidents claimed the lives of 2,949 workers. Although multiple-fatality incidents account for only 4 percent of all fatal incidents, nearly 10 percent of fatally injured workers die therein. As the following tabulation shows, almost three-quarters of these incidents involve only two fatalities, but the nine worst catastrophes claimed a total of 266 workers' lives:

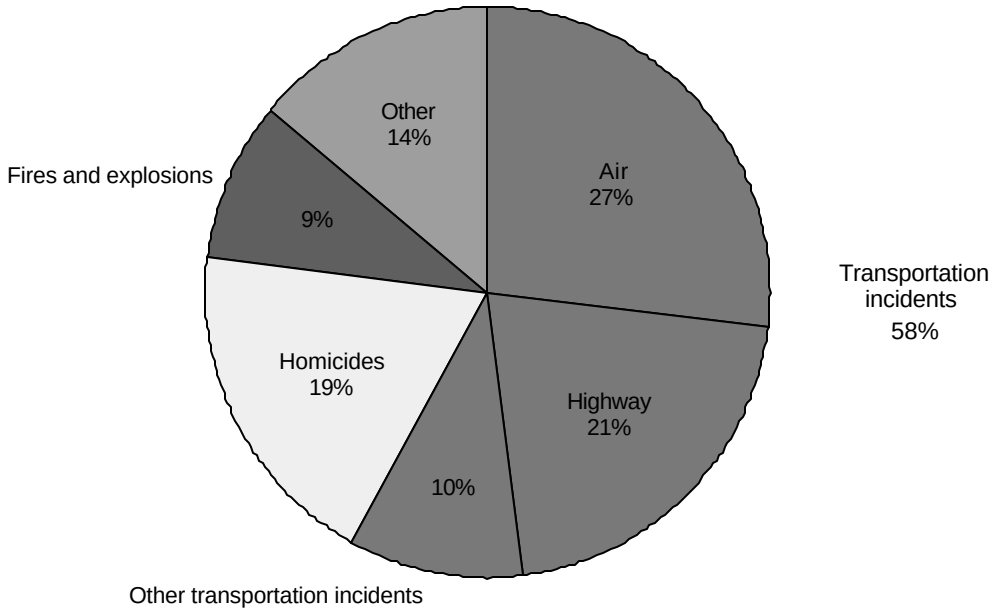
Fatalities per incident	*Incidents*	*Fatalities*
Total	1,109	2,949
2	828	1,656
3	157	471
4	71	284
5 to 9	44	272
10 or more ...	9	266

One way to measure multiple-fatality incidents is by the average number of fatalities per incident. Overall, multiple-fatality incidents average three fatalities per incident. Federal Government multiple-fatality incidents average four fatalities.

The number of multiple-fatality incidents is relatively stable from year to year; from 1995 to 1999 it averaged 222, with each year varying from this average by less than 15 percent. But, because a single incident, such as a commercial jetliner crash or the bombing of a major building, might involve a large number of fatalities, the number of associated fatalities fluctuates from year to year to a greater extent than does the number of multiple-fatality incidents.[2] By combining data

Dino Drudi and Mark Zak are economists in the Office of Safety, Health, and Working Conditions, Bureau of Labor Statistics. E-mail: drudi.dino@bls.gov or zak.mark@bls.gov

Chart 1. How workers die in multiple-fatality incidents, 1995–99



SOURCE: Bureau of Labor Statistics, Census of Fatal Occupational Injuries.

for 5 years, any such fluctuations can be sufficiently mitigated to ensure a meaningful analysis. As the following tabulation shows, the number of associated fatalities in each of the 5 years from 1995 to 1999 varies less than 20 percent from the 590 annual average for this period:

Year	*Fatality incidents*	*Fatalities*
1995–99	1,109	2,949
1995	231	694
1996	194	551
1997	222	540
1998	227	550
1999	235	614
Average	222	590

How workers die in multiple-fatality incidents

Chart 1 illustrates how workers die in multiple-fatality incidents. Nearly three-fifths die in various kinds of work-related transportation incidents, almost half of which are air crashes and nearly two-fifths of which are highway incidents. Homicides, accounting for one-fifth of deaths in multiple-fatality incidents, are next. Fires and explosions account for less than one-tenth of such fatalities.

Multiple-fatality incidents occur in varying degrees in almost all event or exposure categories,[3] but in some such categories they account for larger or smaller shares than overall. Table 1 shows, for selected event or exposure categories, the percentage of overall incidents involving more than one fatality and the percentage of overall fatalities attributable to such incidents. To illustrate, multiple-fatality transportation incidents make up 5 percent of fatal transportation incidents overall and account for 13 percent of workers who die in transportation incidents. Because multiple-fatality incidents, by definition, involve two or more fatalities, the percentages of fatalities associated with such incidents are larger, for each event or exposure category, than the corresponding percentages of multiple-fatality incidents.

Table 1 shows that three-fifths of workers who die in air crashes, three-fifths who perish in water vessel casualties, and three-tenths who die in fires do so in incidents claiming the lives of more than one worker, whereas multiple-fatality incidents are rare for contact with objects and for falls. Nevertheless, some injury categories in which a high proportion of worker fatalities is associated with multiple-fatality incidents do not involve a high number of overall worker fatalities. Water vessel casualty fatalities and fire fatalities, for example, each account for less than 2 percent of overall fatalities. Conversely, some situations are highly unlikely to involve multiple fatalities.[4]

Table 1. Multiple-fatality incidents as a percentage of overall fatal incidents, and fatalities as a percentage of overall fatalities, by selected event or exposure, 1995–99

[Percent of total for event or exposure]

Event or exposure	Incidents	Fatalities
Multiple fatalities	4	10
Fires and explosions	11	26
Fires	13	30
Explosions	10	22
Transportation incidents	5	13
Air crashes	33	61
Water vessel casualties	36	61
Head-on highway collisions	9	17
Assaults and violent acts	4	11
Exposure to harmful substances	3	7
Contact with hot objects or substances	8	16
Confined spaces[1]	13	24
Contact with objects and equipment	1	2
Contact with overhead power lines	5	10
Nontrenching cave-ins, avalanches	14	24
Collapsing structures	8	17
Falls	1	2

[1] Includes fatalities which occurred in structures that do not meet the definition of permit-required confined spaces contained in Occupational Safety and Health Administration regulations.

Even though multiple-fatality incidents, by definition, involve two or more fatalities, it is possible for subcategories of such incidents to average fewer than two fatalities per incident. For example, for the "worker struck by a vehicle, mobile equipment" category, in which there were only 50 fatalities spread over 27 incidents (or 1.85 fatalities per incident), the average was fewer than 2 fatalities per incident. Such an outcome is, however, possible only because of the characteristics of the fatalities constituting each multiple-fatality incident. For instance, suppose a truckdriver runs over a road crew member and then collides with a jersey barrier, killing them both. In this multiple-fatality incident involving two workers, there was only one in each of the two occupations involved.[5] A murder-suicide is similar: there is usually only one suicide in multiple-fatality murder-suicides, because the perpetrator murders one or more others and then commits suicide.

Transportation incidents. Chart 1 and table 2 show that nearly three-fifths of multiple-fatality incidents and fatalities involve transportation, due primarily to head-on highway collisions and incidents involving air and water vessels. Other highway incidents, nonhighway incidents, and pedestrian fatalities actually account for a smaller share of fatalities in multiple-fatality incidents than their shares of overall fatalities.

As the following tabulation shows, although there are more multiple-fatality highway incidents than multiple-fatality air crashes, air crashes account for more fatalities:[6]

Transportation mode	*Incidents*	*Fatalities*
Total	641	1,709
Aircraft	248	805
Highway vehicle	284	633
Watercraft	60	161
Rail vehicle	24	54
Pedestrian struck by vehicle	27	50

The reason for the prominence of air crashes in multiple-fatality counts is that aircraft average three decedents per multiple-fatality incident, compared with two for multiple-fatality highway incidents. Of the 9 incidents involving 10 or more fatalities, for example, 7 were air crashes. More than one worker is killed in a third of all work-related fatal aircraft incidents, whereas three-fifths of all aircraft-related work fatalities take place in multiple-fatality incidents.

Collisions account for about half of highway incidents and fatalities overall, but two-thirds of multiple-fatality highway incidents and fatalities. Half of multiple-fatality highway collisions involve vehicles moving in opposite directions (head-on collisions), compared with a third for single-fatality incidents, whereas noncollision incidents, such as jackknifings, account for a smaller share of multiple-fatality highway incidents than single-fatality highway incidents. Multiple fatalities may be more likely to result from head-on collisions because they place the occupants of both vehicles at risk of fatality and because the speed with which the vehicles collide is the sum of the speeds at which each is traveling.

As with air crashes, multiple-fatality water-vessel incidents average three decedents per incident. Workers in water vessels are especially vulnerable to multiple-fatality incidents because they usually have multiperson crews and they operate far from assistance in often hostile seas. In icy water without a wet suit, hypothermia can result in death in 6 or 7 minutes. Accordingly, Alaska accounted for one-quarter of the multiple-fatality water-vessel fatalities.

Multiple-fatality incidents are particularly prevalent in vessel casualties.[7] More than one-third of incidents involving vessel casualties are multiple-fatality incidents, which constitute three-fifths of all fatalities from vessel casualties. Of the 252 overall vessel-casualty fatalities, 153 were attributable to 56 of the 155 overall vessel-casualty incidents. Sinkings and capsizings associated with 43 of those 56 incidents accounted for 119 of the 153 fatalities.

Assaults and violent acts. Assaults and violent acts account

Table 2. Multiple-fatality occupational injuries by event or exposure, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Total	1,109	100	2,949	100
Transportation incidents	641	58	1,709	58
Highway	284	26	633	21
Collision between vehicles, mobile equipment	184	17	417	14
Reentrant collision	3	–	17	1
Moving in same direction	23	2	51	2
Moving in opposite directions, oncoming	98	9	206	7
Moving in intersection	36	3	79	3
Moving and standing vehicle, mobile equipment—in roadway	10	1	18	1
Moving and standing vehicle, mobile equipment—side of road	5	–	10	–
Vehicle struck stationary object or equipment in roadway	3	–	6	–
Vehicle struck stationary object or equipment on side of road	46	4	95	3
Noncollision	48	4	106	4
Jackknifed or overturned—no collision	36	3	79	3
Ran off highway—no collision	9	1	19	1
Nonhighway (farm, industrial premises)	3	–	6	–
Aircraft	248	22	805	27
Worker struck by vehicle, mobile equipment	27	2	50	2
Worker struck by vehicle, mobile equipment in roadway	10	1	16	1
Worker struck by vehicle, mobile equipment on side of road	14	1	22	1
Worker struck by vehicle, mobile equipment in parking lot or nonroad area	6	1	12	–
Water vehicle	60	5	161	5
Collision	5	–	13	–
Explosion, fire, n.e.c.	4	–	13	–
Fall from or on ship or boat	4	–	7	–
Sinking, capsized water vehicle	43	4	119	4
Railway	24	2	54	2
Collision between railway vehicles	10	1	21	1
Collision between railway vehicle and other vehicle	13	1	29	1
Assaults and violent acts	208	19	611	21
Homicides	207	19	575	19
Hitting, kicking, beating	6	1	11	–
Shooting	190	17	409	14
Stabbing	11	1	19	1
Assaults and violent acts by person(s), n.e.c.	6	1	136	5
Suicide, self-inflicted injury	34	3	34	1
Contact with objects and equipment	55	5	113	4
Struck by object	16	1	30	1
Struck by falling object	11	1	20	1
Caught in or crushed in collapsing materials	37	3	78	3
Excavation or trenching cave-in	10	1	21	1
Other cave-in or landslide	9	1	18	1
Caught in or crushed in collapsing structure	13	1	29	1
Falls	25	2	53	2
Fall to lower level	25	2	53	2
Fall from scaffold, staging	7	1	14	–
Fall from building girders or other structural steel	9	1	21	1
Fall to lower level, n.e.c.	6	1	11	–
Exposure to harmful substances or environments	91	8	198	7
Contact with electric current	39	4	81	3
Contact with overhead power lines	33	3	67	2
Struck by lightning	3	–	6	–
Contact with temperature extremes	6	1	15	1
Contact with hot objects or substances	5	–	11	–
Exposure to caustic, noxious, or allergenic substances	29	3	61	2
Inhalation of substance	28	3	59	2
Inhalation in enclosed, restricted, or confined space[1]	21	2	43	1
Inhalation in open or nonconfined space	6	1	14	–
Oxygen deficiency	17	2	40	1
Drowning, submersion	13	1	31	1

See footnotes at end of table.

Table 2. Continued—Multiple-fatality occupational injuries by event or exposure, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Depletion of oxygen in other enclosed, restricted, or confined space[1]	3	–	7	–
Fires and explosions	93	8	265	9
Fires—unintended or uncontrolled	53	5	155	5
Fire in residence, building, or other structure	38	3	110	4
Forest, brush, or other outdoor fire	5	–	15	1
Explosion	41	4	110	4
Explosion, unspecified	2	–	6	–
Explosion of pressure vessel or piping	12	1	33	1

[1] Includes fatalities which occurred in structures that do not meet the definition of permit-required confined spaces as defined by Occupational Safety and Health Administration regulations.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate less than or equal to 0.5 percent; n.e.c. = not elsewhere classified.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries.

for about one-fifth of multiple-fatality incidents and fatalities, slightly more than for fatalities overall. The category includes 173 multiple-homicide incidents claiming 535 workers' lives, plus 34 murder-suicides claiming an additional 40 workers' lives beyond the assailants who committed suicide in these incidents. The association between the victim and the perpetrator or the circumstances associated with the crime could be determined in more than two-thirds of work-related multiple-fatality homicides. The following tabulation summarizes these associations or circumstances:

Association of perpetrator to victim or circumstance associated with crime	*Percent of multiple-fatality work-related homicides*
Total (number = 575)	100
Association determined	70
Robber	24
Igniter of bomb or explosion	20
Coworker	19
Spouse (present or former), relative, or acquaintance	4
Customer or client	3
Association not determined	30

Overall, coworkers make up under one-tenth of all work-related homicide perpetrators, but are a fifth of multiple-fatality homicide perpetrators; robbers are a third of work-related homicide perpetrators, but only a quarter of multiple-fatality homicide perpetrators.[8]

Fires and explosions. Fires and explosions account for less than one-tenth of multiple-fatality incidents and fatalities. These 93 incidents claimed the lives of 265 workers.

The "fires and explosions" category, perhaps better than any other event or exposure category, illustrates how multiple-fatality incidents are atypical of the fatal-injury experience as a whole. Fires and explosions account for only 3 percent of overall work fatalities, thereby ranking as the smallest major event or exposure category among the six for which the Bureau of Labor Statistics routinely reports fatality data.[9]

But as table 2 shows, the "fires and explosions" category ranks third in the percentage of multiple fatalities, with 9 percent. Three other categories—exposure to harmful substances or environments, contact with objects or equipment, and falls—have fewer fatalities. Most strikingly, however, as table 1 shows, the "fires and explosions" category ranks first among major event categories with regard to the percentage of overall worker fatalities attributable to multiple-fatality incidents.

Other events or exposures. Exposure to harmful substances or environments accounts for less than one-tenth of multiple-fatality incidents, but, because this category averages only two decedents per incident, it accounts for an even smaller share of the fatalities in multiple-fatality incidents.

Falls, which constitute one-eighth of overall fatalities, account for a negligible share of multiple-fatality incidents and fatalities.

Factors underlying multiple-fatality incidents

The fatal event or exposure, such as the air crash, head-on highway collision, robbery-murder, explosion, or structural collapse, is the most consistent factor underlying the multiple-

fatality phenomenon. Except for murder-suicides, very rarely does the fatal event or exposure differ for the individual fatalities within a multiple-fatality incident.

In six-sevenths of multiple-fatality incidents, the workers involved work in the same or similar industries, while in two-thirds of multiple-fatality incidents, those involved work in the same or similar occupations. These ratios suggest that the industries in which workers are employed, more so than their particular occupations, are the more important factor in multiple-fatality incidents.

Industry and occupation. Most industries, especially in the private sector, are composed of workers in many different occupations.[10] Tables 3 and 4 illustrate, respectively, the number and percent distribution of multiple-fatality incidents and fatalities, by industry and occupation. Various kinds of jobs, as determined by industry and occupation, are particularly prone to multiple-fatality incidents.

Among civilian and military airplane pilots and navigators—an occupation with the third-highest overall fatality rate—there were 176 multiple-fatality incidents involving 271 fatalities. Half of all airplane pilot and navigator work fatalities took place in multiple-fatality incidents. Because pilots and passengers in some sort of work status often perish in the same incident, fewer than two pilots, on average, perish per multiple-fatality incident. Over the study period, public transportation attendants averaged more than 6 fatalities per multiple-fatality incident, due largely to a single air crash claiming more than two dozen flight attendants, a job falling into the occupational category of public transportation attendants. Of the 6 multiple-fatality incidents involving this occupation, 5 involved flight attendants, claiming 37 of them, plus 14 pilots and 26 workers in other occupations.

The air transportation industry accounts for 1 percent of overall fatalities and employment. But, as table 3 shows, it accounts for 8 percent of multiple-fatality incidents and 7 percent of fatalities in such incidents. Because nonscheduled air transportation, which usually involves smaller aircraft and crews, averages fewer than 2 fatalities per multiple-fatality incident, that industry accounts for seven-tenths of the multiple-fatality incidents in air transportation, but only half of the associated fatalities. In contrast, because scheduled air transportation averages 5 fatalities per incident, it accounts for almost as many fatalities in multiple-fatality incidents as does nonscheduled air transportation, yet with only a quarter as many multiple-fatality incidents as nonscheduled air transportation. Often, other fatalities in air transportation incidents are passengers who are present on the aircraft in connection with their jobs in other industries.[11]

Sometimes, air crashes can cause multiple-fatality incidents to account for a substantial segment of fatalities in industries unrelated to air transportation, but which might involve frequent travel. Air crashes predominate, for example, in research, development, and testing services, an industry in which multiple-fatality incidents account for nearly a third of the worker fatalities, and in engineering and architectural services, in which they account for more than a sixth. Of the 157 fatalities in these two components of engineering and management services, 15 multiple-fatality incidents account for 33 fatalities—19 of which occurred in multiple-fatality air crashes. Even in industries with low fatality counts, multiple-fatality air crashes can account for a high share of the industry's overall fatalities. For example, of the 39 fatalities in mailing, reproduction, and stenographic services, 11 multiple-fatality air crashes accounting for 15 fatalities made up two-fifths of the industry's fatalities.

In contrast, even though taxicab driver is an occupation with a very high fatality rate, due largely to homicides (typically during robberies),[12] multiple-fatality incidents are rare because taxicab drivers usually work alone. Of the 422 taxicab driver fatalities from 1995 to 1999, only 9 occurred in multiple-fatality incidents.

For the most part, multiple-fatality incidents distribute somewhat evenly among industries. In only a few industries, for various reasons, do they stand out as involving a substantially larger share of fatalities than the overall share.

For example, catastrophic fires and explosions may be particularly endemic to some industries. Fires and explosions account for four-fifths of fatalities in multiple-fatality incidents in the chemicals and allied products industry. Similarly, petroleum refining accounts for nearly all the fatalities from multiple-fatality incidents in the petroleum and coal products industry; three-quarters of those fatalities were due to fires. A quarter of the worker fatalities in chemicals and allied products, and a fifth of those in petroleum and coal products, are in multiple-fatality incidents. Of the 262 fatalities in these two industries, 69 are attributable to 27 multiple-fatality incidents. Of the 40 fatalities in explosives and fireworks manufacturing, 26 can be attributed to 8 multiple-fatality incidents, all from fires and explosions.[13]

Of the 164 fatalities in the motor vehicles and equipment and the aircraft and parts manufacturing industries, one-fifth are attributable to 13 multiple-fatality incidents accounting for 35 fatalities. Almost a quarter of worker fatalities in aircraft and parts manufacturing, and a third of those in motor vehicle and car body manufacturing, occurred in multiple-fatality incidents.

Multiple homicides were particularly prevalent in used-car dealerships during the study period. Of the 60 fatalities in this industry, one-fifth are attributable to 6 multiple-fatality incidents accounting for 12 fatalities—10 of which were homicides. By contrast, there were only 14 homicides among the remaining 48 single-fatality incidents.

Railroading is an industry in which a high proportion of workers is clustered into a few jobs specific to the industry.

Table 3. Multiple-fatality occupational injuries by industry, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Total	1,109	100	2,949	100
Private industry	938	85	2,290	78
Agriculture, forestry, and fishing	119	11	287	10
Agricultural production—crops	24	2	55	2
Fruits and tree nuts	7	1	25	1
Fruits and tree nuts, n.e.c.	1	–	13	–
General farms, primarily crop	8	1	16	1
Agricultural production—livestock	18	2	37	1
Livestock, except dairy and poultry	9	1	19	1
Beef cattle feedlots	3	–	6	–
Beef cattle, except feedlots	4	–	9	–
Dairy farms	3	–	6	–
Poultry and eggs	3	–	6	–
Agricultural services	30	3	57	2
Crop services	11	1	19	1
Crop planting and protecting	7	1	14	–
Animal services, except veterinary	3	–	5	–
Farm labor and management services	3	–	5	–
Landscape and horticultural services	12	1	24	1
Landscape counseling and planning	4	–	9	–
Lawn and garden services	4	–	8	–
Ornamental shrub and tree services	4	–	7	–
Fishing, hunting, and trapping	49	4	133	5
Commercial fishing	47	4	128	4
Finfish	17	2	47	2
Shellfish	22	2	63	2
Miscellaneous marine products	3	–	7	–
Hunting, trapping, game propagation	2	–	5	–
Mining	35	3	76	3
Metal mining	3	–	6	–
Coal mining	6	1	11	–
Bituminous coal and lignite mining	4	–	7	–
Oil and gas extraction	21	2	50	2
Oil and gas field services	19	2	46	2
Drilling oil and gas wells	5	–	11	–
Oil and gas field services, n.e.c.	13	1	31	1
Nonmetallic minerals, except fuels	5	–	9	–
Sand and gravel	3	–	5	–
Construction	166	15	339	11
General building contractors	24	2	45	2
Residential building construction	8	1	16	1
Single-family housing construction	5	–	10	–
Residential construction, n.e.c.	3	–	6	–
Nonresidential building construction	13	1	23	1
Nonresidential construction, n.e.c.	10	1	19	1
Heavy construction, except building	45	4	92	3
Highway and street construction	14	1	26	1
Heavy construction, except highway	31	3	66	2
Bridge, tunnel, and elevated highway	3	–	6	–
Water, sewer, and utility lines	13	1	26	1
Heavy construction, n.e.c.	15	1	34	1
Special trade contractors	97	9	200	7
Plumbing, heating, and air-conditioning	5	–	11	–
Painting and paper hanging	7	1	14	–
Electrical work	14	1	27	1
Masonry, stonework, tile setting, and plastering	11	1	22	1
Masonry and other stonework	7	1	14	–
Plastering, drywall, and insulation	4	–	8	–
Roofing, siding, and sheet metal work	11	1	21	1
Concrete work	5	–	10	–
Miscellaneous special trade contractors	42	4	87	3
Structural steel erection	8	1	17	1
Excavation work	5	–	8	–
Wrecking and demolition work	5	–	10	–
Special trade contractors, n.e.c.	21	2	46	2

See footnotes at end of table.

Table 3. Continued—Multiple-fatality occupational injuries by industry, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Manufacturing	133	12	290	10
Food and kindred products	12	1	20	1
Meat products	4	–	6	–
Apparel and other textile products	5	–	9	–
Lumber and wood products	11	1	18	1
Logging	4	–	7	–
Sawmills and planing mills	4	–	–	–
Sawmills and planing mills, general	3	–	6	–
Furniture and fixtures	5	–	8	–
Household furniture	5	–	8	–
Printing and publishing	5	–	8	–
Chemicals and allied products	20	2	54	2
Industrial inorganic chemicals	3	–	6	–
Drugs	2	–	7	–
Medicinals and botanicals	2	–	7	–
Industrial organic chemicals	3	–	8	–
Miscellaneous chemical products	8	1	26	1
Explosives	4	–	8	–
Chemicals and chemical preparations, n.e.c.	4	–	18	1
Petroleum and coal products	7	1	15	1
Petroleum refining	6	1	14	–
Rubber and miscellaneous plastics products	4	–	8	–
Miscellaneous plastics products, n.e.c.	4	–	8	–
Stone, clay, glass and concrete products	6	1	12	–
Concrete, gypsum, and plaster products	4	–	8	–
Ready-mixed concrete	3	–	6	–
Primary metal industries	13	1	31	1
Blast furnace and basic steel products	6	1	17	1
Blast furnaces and steel mills	4	–	12	–
Iron and steel foundries	4	–	10	–
Gray and ductile iron foundries	2	–	6	–
Fabricated metal products	8	1	17	1
Miscellaneous fabricated metal products	3	–	7	–
Industrial machinery and equipment	10	1	21	1
Construction and related machinery	3	–	7	–
Electronic and other electronic equipment	3	–	6	–
Transportation equipment	19	2	49	2
Motor vehicles and equipment	8	1	24	1
Motor vehicles and car bodies	5	–	13	–
Motor vehicle parts and accessories	2	–	5	–
Aircraft and parts	5	–	11	–
Ship and boat building and repairing	3	–	8	–
Transportation and public utilities	252	23	528	18
Railroad transportation	16	1	31	1
Railroads	16	1	31	1
Local and interurban passenger transportation	11	1	15	1
Local and suburban transportation	8	1	11	–
Trucking and warehousing	100	9	182	6
Trucking and courier services, except air	96	9	174	6
Local trucking, without storage	16	1	23	1
Trucking, except local	73	7	132	4
Public warehousing and storage	3	–	6	–
Water transportation	14	1	36	1
Deep sea foreign transportation of freight	4	–	11	–
Water transportation of passengers	1	–	5	–
Deep sea transportation of passengers, except by ferry	1	–	5	–
Water transportation services	8	1	18	1
Towing and tugboat services	4	–	10	–
Transportation by air	91	8	199	7
Air transportation, scheduled, and air courier services	18	2	84	3
Air transportation, scheduled	16	1	81	3
Air transportation, nonscheduled	65	6	99	3
Airports, flying fields, and services	10	1	16	1
Transportation services	5	–	12	–
Passenger transportation arrangement	2	–	5	–

See footnotes at end of table.

Table 3. Continued—Multiple-fatality occupational injuries by industry, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Freight transportation arrangement	2	–	5	–
Communications	8	1	11	–
Electric, gas, and sanitary services	21	2	42	1
Electric services	8	1	18	1
Combination utility services	3	–	7	–
Electric and other services combined	2	–	5	–
Sanitary services	6	1	11	–
Refuse systems	6	1	11	–
Wholesale trade	42	4	79	3
Wholesale trade—durable goods	25	2	49	2
Motor vehicles, parts, and supplies	4	–	5	–
Professional and commercial equipment	2	–	8	–
Hardware, plumbing and heating equipment	4	–	10	–
Machinery, equipment, and supplies	8	1	11	–
Miscellaneous durable goods	4	–	9	–
Scrap and waste materials	3	–	5	–
Wholesale trade—nondurable goods	17	2	30	1
Groceries and related products	8	1	16	1
Farm-product raw materials	2	–	5	–
Retail trade	128	12	261	9
General merchandise stores	7	1	11	–
Department stores	4	–	6	–
Food stores	28	3	54	2
Grocery stores	24	2	46	2
Automotive dealers and service stations	17	2	31	1
New- and used-car dealers	3	–	5	–
Used-car dealers	6	1	12	–
Apparel and accessory stores	4	–	13	–
Family clothing stores	2	–	9	–
Furniture and homefurnishings stores	5	–	12	–
Furniture and homefurnishings stores	3	–	8	–
Eating and drinking places	41	4	82	3
Eating places	31	3	61	2
Drinking places	5	–	9	–
Miscellaneous retail	27	2	56	2
Liquor stores	4	–	9	–
Miscellaneous shopping goods stores	7	1	15	1
Sporting goods and bicycle shops	3	–	7	–
Nonstore retailers	7	1	17	1
Direct selling establishments	4	–	12	–
Fuel dealers	3	–	6	–
Retail stores, n.e.c.	4	–	5	–
Finance, insurance, and real estate	29	3	77	3
Depository institutions	8	1	30	1
Savings institutions	3	–	6	–
Credit unions	2	–	19	1
Insurance carriers	3	–	6	–
Insurance agents, brokers, and service	4	–	9	–
Real estate	9	1	18	1
Real estate operators and lessors	5	–	11	–
Nonresidential building operators	3	–	5	–
Real estate agents and managers	3	–	6	–
Holdings and other investment offices	2	–	7	–
Miscellaneous investing	1	–	6	–
Services	170	15	335	11
Hotels and other lodging places	3	–	7	–
Hotels and motels	3	–	7	–
Personal services	5	–	8	–
Business services	51	5	83	3
Mailing, reproduction, stenographic	11	1	15	1
Miscellaneous equipment rental and leasing	5	–	7	–
Personnel supply services	11	1	20	1
Help supply services	11	1	20	1
Computer and data processing services	5	–	5	–

See footnotes at end of table.

Table 3. Continued—Multiple-fatality occupational injuries by industry, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Miscellaneous business services	15	1	28	1
Detective and armored car services	7	1	15	1
Automotive repair, services, and parking	11	1	20	1
Automotive repair shops	8	1	13	–
Top, body, and upholstery repair shops and paint shops	3	–	5	–
General automotive repair shops	3	–	6	–
Miscellaneous repair services	4	–	9	–
Miscellaneous repair shops	4	–	9	–
Motion pictures	3	–	7	–
Amusement and recreation services	19	2	40	1
Producers, orchestras, entertainers	5	–	9	–
Miscellaneous amusement, recreation services	14	1	31	1
Health services	20	2	39	1
Nursing and personal care facilities	3	–	5	–
Hospitals	8	1	17	1
General medical and surgical hospitals	7	1	13	–
Legal services	13	1	21	1
Educational services	15	1	24	1
Colleges and universities	2	–	5	–
Schools and educational services, n.e.c.	9	1	13	–
Social services	3	–	7	–
Child day care services	2	–	5	–
Membership organizations	12	1	24	1
Religious organizations	9	1	18	1
Engineering and management services	20	2	39	1
Engineering and architectural services	9	1	18	1
Engineering services	3	–	6	–
Architectural services	3	–	5	–
Surveying services	3	–	7	–
Research and testing services	6	1	15	1
Government[1]	214	19	659	22
Federal Government (including resident Armed Forces)	84	8	378	13
Transportation and public utilities	3	–	7	–
Public administration	79	7	368	12
Executive, legislative, and general government	2	–	97	3
Justice, public order, and safety	4	–	7	–
Public order and safety	4	–	7	–
Police protection	4	–	7	–
Environmental quality and housing and administration of economic programs	11	1	28	1
National security and international affairs	60	5	232	8
National security	60	5	232	8
State government	54	5	106	4
Construction	6	1	10	–
Heavy construction, except building	6	1	10	–
Highway and street construction	6	1	10	–
Services	13	1	26	1
Educational services	8	1	15	1
Colleges and universities	8	1	15	1
Social services	3	–	7	–
Public administration	33	3	66	2
Justice, public order, and safety	16	1	30	1
Public order and safety	16	1	30	1
Police protection	13	1	23	1
Finance, taxation, and monetary policy	1	–	5	–
Administration of human resources	2	–	5	–
Environmental quality and housing and administration of economic programs	11	1	20	1

See footnotes at end of table.

Table 3. Continued—Multiple-fatality occupational injuries by industry, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Local government	81	7	170	6
Construction	3	–	5	–
Heavy construction, except building	3	–	5	–
Transportation and public utilities	4	–	8	–
Electric, gas, and sanitary services	4	–	8	–
Services	13	1	22	1
Educational services	7	1	13	–
Elementary and secondary schools	5	–	10	–
Public administration	64	6	135	5
Executive, legislative, and general government	8	1	17	1
Executive and legislative combined	3	–	8	–
Justice, public order, and safety	53	5	113	4
Public order and safety	53	5	113	4
Police protection	22	2	37	1
Fire protection	31	3	73	2
Environmental quality and housing and administration of economic programs	3	–	5	–

[1] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate less than or equal to 0.5 percent; n.e.c. = not elsewhere classified.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

The 35 fatalities in 18 multiple-fatality incidents, accounting for one-fifth of railroading's overall fatalities, are composed almost entirely of workers in a few rail transportation occupations, such as locomotive operator or train conductor.[14] Accordingly, the 15 multiple-fatality incidents involving rail transportation occupations account for 27 of the 113 fatalities in this group of occupations. Almost all were transportation incidents, such as collisions between rail vehicles or derailments.

Fishers and loggers typically have maintained the highest overall fatality rates, exchanging places as the most deadly job from year to year. Yet, their multiple-fatality experiences are radically different. A multiple-fatality incident is rare among timber-cutting and logging occupations.[15] The 584 timber-cutting and logging fatalities include only 5 multiple-fatality incidents with 8 associated fatalities. Fishers, including fishing vessel captains and officers, by contrast, make up 1 percent of overall fatalities, but 4 percent of fatalities in multiple-fatality incidents. Fishing's 44 multiple-fatality incidents account for 122 of the 339 fisher fatalities during the 5-year study period. Almost all of the fishing fatalities are the result of water-vessel incidents, mostly vessel casualties.

Similarly, among water transportation occupations, the 13 multiple-fatality incidents accounting for 32 fatalities make up one-sixth of fatalities in this occupation group, which includes ship captains, mates, sailors, deckhands, and marine engineers, except on fishing boats. As with fishing, most of these deaths involve vessel casualties. Likewise, of the water transportation industry's 189 fatalities, 36 occurred in 14 multiple-fatality incidents.

Firefighting occupations account for 31 multiple-fatality incidents involving 72 fatalities. Fires and explosions claimed the lives of 52 of the 72 firefighters who died in multiple-fatality incidents, with most of the rest of these fatalities occurring in transportation incidents.

Although managerial and professional specialty occupations have a very low fatality risk overall, one-sixth of fatally injured workers in these occupations die in multiple-fatality incidents. This phenomenon appears to be widely spread through the various managerial and professional specialty categories, driven by the disproportionately high incidence of transportation fatalities and homicides and suicides among these workers. While managerial and professional specialty occupations account for one-ninth of overall occupational fatalities, they make up one-fifth of multiple-fatality transportation incidents and one-third of multiple-fatality homicides and suicides. For example, the legal profession, with a fatality rate a mere fraction of the overall rate, is very safe. Nevertheless, 14 multiple-fatality incidents involving 20 fatalities account for more than a quarter of the 74 work-related fatal injuries to lawyers, mainly air crashes in which workers in other occupations also died.

Table 4. Multiple-fatality occupational injuries by occupation, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Total	1,109	100	2,949	100
Civilian occupations	1,058	95	2,726	92
Managerial and professional specialty occupations	266	24	531	18
Executive, administrative, and managerial occupations	183	17	327	11
Administrators and officials, public administration	7	1	28	1
Financial managers	11	1	12	–
Managers, marketing, advertising, and public relations	10	1	12	–
Administrators, education and related fields	5	–	6	–
Managers, food serving and lodging establishments	32	3	36	1
Managers, properties and real estate	7	1	13	–
Managers and administrators, n.e.c.	101	9	151	5
Management-related occupations	32	3	59	2
Accountants and auditors	12	1	18	1
Other management-related occupations	22	2	41	1
Professional specialty occupations	112	10	204	7
Engineers, architects, and surveyors	24	2	46	2
Architects	4	–	6	–
Engineers	20	2	40	1
Electrical and electronic engineers	8	1	10	–
Engineers, n.e.c.	5	–	12	–
Mathematical and computer scientists8	1	9	–	
Computer systems analysts and scientists	7	1	8	–
Natural scientists	10	1	13	–
Biological and life scientists	4	–	5	–
Health diagnosing occupations	5	–	6	–
Health assessment and treating occupations	17	2	28	1
Registered nurses	11	1	14	–
Therapists	4	–	6	–
Physician's assistants	2	–	7	–
Teachers, postsecondary	5	–	8	–
Teachers, except postsecondary	13	1	15	1
Teachers, n.e.c.	10	1	11	–
Social, recreation, and religious workers	11	1	21	1
Social workers	4	–	8	–
Clergy and religious workers	7	1	13	–
Lawyers	14	1	20	1
Writers, artists, entertainers, and athletes	25	2	34	1
Photographers	11	1	13	–
Designers, musicians, composers, actors, and other artists, performers, and related workers	9	1	13	–
Athletes	2	–	5	–
Technical, sales, and administrative support	290	26	536	18
Technicians and related support occupations	173	16	273	9
Health technologists and technicians	12	1	14	–
Health technologists and technicians, n.e.c.	11	1	13	–
Engineering and related technologists and technicians	11	1	14	–
Electrical and electronic technicians	5	–	6	–
Surveying and mapping technicians	3	–	5	–
Science technicians	5	–	9	–
Technicians, except health, engineering, and science	159	14	236	8
Airplane pilots and navigators	146	13	215	7
Technicians, n.e.c.	11	1	13	–
Sales occupations	102	9	177	6
Supervisors and proprietors, sales occupations	53	5	74	3
Sales representatives, finance and business services	9	1	19	1
Securities and financial services sales occupations	1	–	9	–
Sales representatives, commodities except retail	13	1	15	1
Sales representatives, mining, manufacturing, and wholesale	13	1	15	1
Sales workers, retail and personal services	43	4	68	2

See footnotes at end of table.

Table 4. Continued—Multiple-fatality occupational injuries by occupation, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Sales workers, other commodities	14	1	19	1
Sales counter clerks	3	–	5	–
Cashiers	18	2	25	1
Street and door-to-door sales workers	2	–	9	–
Administrative support occupations, including clerical	35	3	86	3
Supervisors, administrative support occupations	3	–	7	–
Secretaries, stenographers, and typists	5	–	11	–
Information clerks	7	1	13	–
Records processing occupations, except financial	4	–	10	–
Mail and message distributing occupations	4	–	7	–
Material recording, scheduling, and distributing clerks	6	1	10	–
Stock and inventory clerks	3	–	6	–
Miscellaneous administrative support	6	1	19	1
General office clerks	2	–	8	–
Administrative support occupations, n.e.c.	4	–	5	–
Service occupations	141	13	309	10
Protective service occupations	81	7	176	6
Firefighting and fire prevention occupations, including administrators and supervisors	31	3	72	2
Administrators and supervisors, firefighting and fire prevention occupations	6	1	10	–
Firefighting occupations	30	3	62	2
Police and detectives, including supervisors	38	3	82	3
Supervisors, police, detectives, and correctional institution officers	6	1	6	–
Police and detectives, public service	27	2	55	2
Sheriffs, bailiffs, and other law enforcement officers	9	1	15	1
Correctional institution officers	2	–	6	–
Guards, including supervisors	14	1	22	1
Guards and police, except public service	11	1	18	1
Service occupations, except protective and household	61	6	133	5
Food preparation and service occupations	27	2	40	1
Waiters and waitresses	4	–	5	–
Cooks	13	1	16	1
Miscellaneous food preparation occupations	4	–	6	–
Health service occupations	4	–	7	–
Nursing aides, orderlies, and attendants	4	–	7	–
Cleaning and building service occupations, except household	20	2	30	1
Janitors and cleaners	16	1	24	1
Personal service occupations	14	1	56	2
Guides	5	–	10	–
Public transportation attendants	6	1	39	1
Farming, forestry, and fishing	115	10	269	9
Farming operators and managers	23	2	33	1
Farmers, except horticultural	14	1	21	1
Managers, farms, except horticultural	9	1	12	–
Other agricultural and related occupations	52	5	101	3
Farm occupations, except managerial	39	4	74	3
Supervisors, farmworkers	5	–	5	–
Farmworkers	37	3	69	2
Related agricultural occupations	14	1	27	1
Groundskeepers and gardeners, except farm	8	1	18	1
Animal caretakers, except farm	4	–	5	–
Forestry and logging occupations	7	1	11	–
Timber cutting and logging occupations	5	–	8	–
Fishers, hunters, and trappers	45	4	124	4
Fishers, including vessel captains and officers	44	4	122	4
Precision production, craft, and repair	212	19	361	12
Mechanics and repairers	66	6	98	3
Supervisors, mechanics and repairers	9	1	12	–
Mechanics and repairers, except supervisors	61	6	86	3
Vehicle and mobile equipment mechanics, repairers	31	3	42	1
Automobile mechanics	6	1	10	–
Bus, truck, and stationary engine mechanics	3	–	5	–

See footnotes at end of table.

Table 4. Continued—Multiple-fatality occupational injuries by occupation, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Aircraft engine mechanics	10	1	11	–
Heavy equipment mechanics	9	1	13	–
Electrical and electronic equipment repairers	8	1	12	–
Electronic repairers, communications and industrial equipment	7	1	11	–
Miscellaneous mechanics and repairers	**17**	**2**	**25**	**1**
Office machine repairers	1	–	6	–
Specified mechanics and repairers, n.e.c.	6	1	9	–
Not-specified mechanics and repairers	6	1	6	–
Construction trades	107	10	184	6
Brickmasons, stonemasons, tile setters, including supervisors	3	–	5	–
Carpet installers, carpenters, drywall installers, including supervisors	13	1	20	1
Electricians and electrical power installers and repairers, including supervisors	24	2	42	1
Painters, paperhangers, and plasterers, including supervisors	8	1	15	
Plumbers, pipefitters, steamfitters, including supervisors	13	1	20	1
Supervisors, n.e.c.	16	1	17	1
Concrete and terrazzo finishers	3	–	5	–
Roofers	5	–	8	–
Structural metal workers	9	1	18	1
Construction trades, n.e.c.	14	1	25	1
Extractive occupations	24	2	33	1
Drillers, oil wells	7	1	8	–
Mining machine operators	6	1	9	–
Mining occupations, n.e.c.	9	1	11	–
Precision production occupations	36	3	46	2
Supervisors, production occupations	19	2	23	1
Precision metalworking occupations	11	1	13	–
Machinists	5	–	6	–
Plant and system operators	7	1	8	–
Operators, fabricators, and laborers	370	33	697	24
Machine operators, assemblers, and inspectors	66	6	114	4
Machine operators and tenders, except precision	39	4	66	2
Metalworking and plasticworking machine operators	3	–	6	–
Machine operators, assorted materials	32	3	51	2
Furnace, kiln, and oven operators, except food	5	–	9	–
Miscellaneous machine operators, n.e.c.	8	1	12	–
Machine operators, not specified	**12**	**1**	**16**	**1**
Fabricators, assemblers, and handworking occupations	30	3	44	1
Welders and cutters	23	2	34	1
Assemblers	7	1	10	–
Transportation and material moving occupations	204	18	368	12
Motor vehicle operators	155	14	267	9
Truckdrivers	137	12	242	8
Driver-sales workers	8	1	8	–
Busdrivers	4	–	5	–
Taxicab drivers and chauffeurs	6	1	9	–
Transportation occupations, except motor vehicles	28	3	59	2
Rail transportation occupations	15	1	27	1
Railroad conductors and yardmasters	8	1	10	–
Locomotive operating occupations	**10**	**1**	**15**	**1**
Water transportation occupations	13	1	32	1
Ship captains, mates, sailors, and deckhands, except fishing boats	12	1	29	1
Material moving equipment operators	29	3	42	1
Operating engineers	11	1	14	–
Hoist and winch operators	4	–	9	–
Industrial truck and tractor equipment operators	4	–	5	–
Miscellaneous material moving equipment operators	4	–	6	–
Handlers, equipment cleaners, helpers, and laborers	138	12	215	7
Construction laborers	68	6	111	4
Freight, stock, and material handlers	17	2	21	1
Stock handlers and baggers	8	1	9	–
Freight, stock, and material handlers, n.e.c.	7	1	10	–

See footnotes at end of table.

Table 4. Continued—Multiple-fatality occupational injuries by occupation, 1995–99

Characteristics	Multiple-fatality incidents		Fatalities	
	Number	Percent	Number	Percent
Vehicle washers and equipment cleaners	3	–	5	–
Laborers, except construction	42	4	66	2
Nonclassifiable occupations	20	2	23	1
Military occupations	56	5	223	8
Technical, sales, and administrative support	31	3	57	2
Technicians and related support occupations	31	3	57	2
Technicians, except health, engineering, and science	31	3	56	2
Airplane pilots and navigators	31	3	56	2
Precision production, craft, and repair	5	–	8	–
Mechanics and repairers	5	–	8	–
Mechanics and repairers, except supervisors	5	–	7	–
Vehicle and mobile equipment mechanics, repairers	5	–	7	–
Aircraft engine mechanics	5	–	6	–
Military occupations (Armed Forces), n.e.c.	39	4	152	5

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate less than or equal to 0.5 percent; n.e.c. = not elsewhere classified.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries.

In the same vein, multiple fatality incidents account for one-third of work fatalities involving photographers; these 11 multiple-fatality incidents produced 13 fatalities—all air crashes, typically involving aerial photography, in which 9 pilots and 4 workers in other occupations also perished. Exhibit 1 lists selected occupations with high proportions of multiple-fatality cases and notable characteristics, if any, associated with these occupations.

Multiple-fatality incidents generally do not play prominent roles in factory-type production jobs. An exception is furnace, kiln, and oven operators, except food: of the 31 fatalities involving this occupation, 9 resulted from 5 multiple-fatality incidents in which 4 workers in other occupations also perished. Not surprisingly, these incidents involved primarily fires and explosions. Similarly, of 58 fatally injured assemblers, 10 died in 7 multiple-fatality incidents in which 11 workers in other occupations also perished.

Some occupations that might be expected to have high incidences of multiple fatalities in fact do not. The construction trades, for example, account for one-tenth of overall fatalities, but a much smaller proportion of fatalities in multiple-fatality incidents. Despite images of mine-tunnel collapses and mine explosions, only 9 mining machine operators and 11 miscellaneous mining workers perished in multiple-fatality incidents out of the 215 fatalities suffered by workers in these two occupations during the 5-year study period. Even though extractive occupations have high fatality rates, they merely mirror multiple-fatality aggregate trends, as does mining as an industry. Mine-tunnel collapses are often thought of as multiple-fatality catastrophes, but only a quarter of fatalities among mine workers in such collapses occurred in multiple-fatality incidents. Similarly, although truckdrivers have high fatality rates and experience more job fatalities than any other occupation, only 6 percent of those fatalities occurred in multiple-fatality incidents.

Government. As the following tabulation shows, all levels of government claim a larger share of multiple-fatality incidents and associated fatalities than does the private sector:[16]

	Overall fatalities, percent	*Multiple-fatality incidents*		*Associated fatalities*	
		Number	*Percent*	*Number*	*Percent*
Private industry	90	938	85	2,290	78
Government	10	214	19	659	22
Federal	3	84	8	378	13
State	2	54	5	106	4
Local	5	81	7	170	6

Note that government accounts for 10 percent of overall fatalities, but twice that share of multiple-fatality incidents and associated fatalities.

1. Federal Government. As table 3 illustrates, national security accounts for more than two-thirds of the multiple-fatality incidents in the Federal Government and three-fifths of the

Exhibit 1. Selected occupations with high proportions of worker fatalities taking place in multiple-fatality incidents, 1995–99

Three-tenths or more of overall worker fatalities in the following occupations took place in multiple-fatality incidents:

Occupation	Notable characteristics
Hunting and other kinds of guides	All transportation incidents
Photographers	All air crashes, typically involving aerial photography
Accountants and auditors	None
Information clerks	None

One-quarter of overall worker fatalities in the following occupations took place in multiple-fatality incidents:

Occupation	Notable characteristics
Lawyers	Mainly air crashes
Financial managers	Two-thirds were homicides
Miscellaneous administrative support occupations	None
Administrators in education and related fields	None
Science technicians	None
Miscellaneous technicians[1]	None
Engineers and architects	Mostly air crashes

A share substantially larger than the overall share of worker fatalities in the following occupations took place in multiple-fatality incidents:

Occupation	Notable characteristics
Health assessment and treating occupations	None
Mathematical, computer, and natural scientists	None
Clergy and religious workers	None
Secretaries, stenographers, and typists	None
Registered nurses	All were air crashes, most involving helicopter ambulances or rescue efforts
University and other postsecondary teachers	None
Artists, except photographers	None

[1] Includes air traffic controllers, broadcast equipment operators, computer programmers, numerical control tool programmers, paralegals and other legal assistants, and miscellaneous technicians other than health, engineering, and science technicians.

associated fatalities. The Federal Government averaged more than four fatalities per multiple-fatality incident and accounted for the most fatalities associated with multiple-fatality incidents of any level of government, even though it has the lowest employment of all three levels.

Multiple-fatality incidents are common in the military. The 56 multiple-fatality incidents involving military personnel account for 223 fatalities, constituting 5 percent of multiple-fatality incidents and 8 percent of associated fatalities. Military occupations account for just under 1 percent of employment and just under 2 percent of overall work fatalities.[17]

As the following tabulation shows, vehicles are associated with virtually all of the military fatalities, with aircraft accounting for virtually all of the vehicles:

Kind of vehicle	*Number of fatalities*
Total	223
Vehicles	210
Aircraft	194
Fixed wing	68
Rotary wing	117
Motor vehicles	16

Rotary-wing aircraft, primarily helicopters, account for nearly twice as many military fatalities in multiple-fatality incidents as do fixed-wing aircraft. Because seven-eighths of military fatalities involve aircraft, military multiple-fatality incidents average 4 decedents per incident.

2. State government. Multiple-fatality incidents and associated fatalities are more widely dispersed in State government than they are in the Federal Government. Police protection accounts for the most fatalities from multiple-fatality incidents. These 23 State police fatalities arising from 13 multiple-fatality incidents represent more than one-fifth of overall State police protection fatalities.

3. Local government. Fire protection accounts for the largest number of multiple-fatality incidents and fatalities in local government, with more than one-third of multiple-fatality incidents and two-fifths of associated fatalities. Police protection accounts for the second-largest number. Although there are more multiple-fatality local police protection incidents and fatalities than in State government, the 37 local police protection fatalities arising from 22 multiple-fatality incidents account for less than one-tenth of local police protection fatalities. It is not clear why so much larger a proportion of State police protection fatalities occurs in multiple-fatality incidents compared with the proportion of local police protection fatalities; the underlying characteristics of multiple-fatality incidents for both categories of worker is a similar mix of homicides and auto and air crashes.

Another surprising finding is the prevalence of multiple-fatality incidents in the public administration of environmental quality, housing, and economic programs. After all levels of government are aggregated, data show that there were 53 fatalities arising from 24 multiple-fatality incidents. These 53 fatalities account for almost one-fifth of this category's fatalities. Air crashes account for almost half of these fatalities, homicides for almost a quarter.

THIS ARTICLE REPRESENTS THE FIRST TIME that the Bureau of Labor Statistics has examined multiple-fatality incidents. A few general conclusions can be reached. First, multiple-fatality incidents occur in varying degrees in almost all event or exposure categories, but in some they make up larger or smaller shares of the category's overall fatalities. Second, except in the case of murder-suicides, very rarely does the fatal event or exposure differ among the individual victims of the same multiple-fatality incident. Third, most multiple-fatality incidents involve workers in the same or similar industries and occupations. Finally, multiple-fatality incidents are a unique phenomenon: in most major respects, the fatal events or exposures underlying the circumstances under which they occur and the kinds of jobs in which they are most prevalent often do not reflect the fatal injury experience as a whole. □

Notes

[1] The Census of Fatal Occupational Injuries (CFOI) program, which has collected occupational fatality data nationwide since 1992, uses diverse data sources to identify, verify, and profile fatal work injuries. Information about each workplace fatality (occupation and other worker characteristics, circumstances of the event, and other cases arising out of the same incident) is obtained by cross-referencing source documents, such as death certificates, workers' compensation records, media accounts, and reports to Federal and State agencies. This approach ensures that counts are as complete and accurate as possible. CFOI data do not include data on fatal work illnesses. For purposes of this article, CFOI data for 1995–99 were used.

[2] For example, in 1995, both the number of fatalities in the "10 or more fatalities per incident" category and the number of fatalities in the Federal Government were significantly greater than the average, due to the bombing of a Federal building that resulted in more than a hundred work-related fatalities.

[3] The event or exposure describes the manner in which the injury was produced or inflicted. For further explanation, see Guy Toscano, Janice Windau, and Dino Drudi, "Using the BLS Occupational Injury and Illness Classification System as a Safety and Health Management Tool," *Compensation and Working Conditions*, June 1996, pp. 19–28.

[4] Even though virtually every kind of fatal event can involve multiple fatalities, the event or exposure categories in which multiple-fatality incidents are rare include sudden stop or start noncollision highway incidents; some nonhighway and railway vehicle incident categories; assaults by animals; being struck by a flying, swinging, or slipping object; being compressed or pinched by rolling, sliding, or shifting objects; falling down stairs or steps; falling from the floor, dock, or ground level; falling from a roof; falling from a nonmoving vehicle; falling from piled or stacked materials; jumping to a lower level; falling on the same level; coming into contact with the electric current of a machine, a tool, an appliance, a light fixture, wiring, a transformer, or some other electrical component; ingestion of a substance; needle sticks; venomous bites; and ignition of one's clothing from a controlled heat source. Multiple fatalities are underrepresented, although less so, among, for example, suicides; workers caught in running equipment or machinery; and workers coming into contact with electric currents other than in overhead power lines. Falls from scaffolds, too, rarely claim more than one worker's life. Even excavation or trenching cave-ins show no greater propensity to result in multiple-fatality incidents than events or exposures overall: during the 5-year study period, the 10 excavation or trenching cave-ins in which more than one worker was killed claimed 21 of the 213 workers involved in these kinds of fatalities.

[5] Another example illustrating this concept is as follows: suppose that, in 4 of 5 multiple-fatality head-on collisions involving truckdrivers, the truckdrivers of both vehicles were killed, but in the fifth only one truckdriver was killed, because the fatally injured driver of the other truck

was a carpenter driving between construction sites; then those five multiple-fatality incidents involved nine truckdrivers and one carpenter, so the average number of fatally injured truckdrivers is 1.8 (that is, 9 truckdrivers ÷ 5 incidents = 1.8 truckdrivers per incident).

[6] Figures for separate categories may not sum to totals because of incidents involving more than one transportation mode and categories that are not shown separately.

[7] Vessel casualties include sinkings, capsizings, and vessel explosions and fires.

[8] Eric F. Sygnatur and Guy A. Toscano, "Work-related Homicides: The Facts," *Compensation and Working Conditions*, spring 2000, p. 5. Also noteworthy is that better information seems to be available on multiple-fatality homicides, reducing the share for which a victim-perpetrator association or circumstance associated with crime is undetermined. Whether this is due to better documentation being available or to the particular mix of victim-perpetrator associations or circumstances associated with crime is unknown.

[9] The only smaller categories are bodily reaction and exertion (which includes overexertion and repetitive motion) and the category titled "nonclassifiable," each of which averaged under a dozen fatality cases per year.

[10] As used in this context, the term *industry* refers to industries listed in the *Standard Industrial Classification Manual* (Office of Management and Budget, 1987), and *occupation* refers to occupations listed in the *Census of Population Alphabetical Index of Occupations* (Bureau of the Census, 1990), as modified by the Bureau of Labor Statistics.

[11] For further information about air transportation occupational fatalities, see Peggy Suarez, "Flying Too High: Worker Fatalities in the Aeronautics Field," *Compensation and Working Conditions*, spring 2000, pp. 39–42.

[12] Andrew T. Knestaut, "Fatalities and Injuries Among Truck and Taxicab Drivers," *Compensation and Working Conditions*, fall 1997, pp. 55–60. This occupation also includes chauffeurs.

[13] Although the industry titled chemicals and chemical preparations, not elsewhere classified (see table 3), involves a disparate range of manufactures, such as lemon and eucalyptus oil, writing ink, soil-testing kits, napalm, and flares, the vast majority of the fatalities in that industry, including virtually all the multiple-fatality incidents, involved fireworks manufacturing.

[14] For purposes of the analysis in this paragraph, commuter railroads and subway and trolley transit operations within Standard Industrial Code 411, "Local and Suburban Transportation" have been combined with Standard Industrial Code 40, "Railroad Transportation."

[15] The timber-cutting and logging category also includes supervisors of forestry and logging workers.

[16] Figures for separate categories may not sum to totals because of incidents involving more than one sector and categories that are not shown separately.

[17] To be included in the fatality census, the incident leading to the death must have occurred within the territorial limits of one of the 50 States or the District of Columbia or within the 200-mile offshore economic zone. Incidents that occur in international airspace or waters may be included if a State, the District of Columbia, or the U.S. military issues a death certificate. Incidents occurring in a foreign country are excluded.

APPENDIX: Identifying work-related multiple fatalities

This appendix explains the mechanics of identifying and reporting work-related multiple-fatality data. Each work-related fatality data record that the Census of Fatal Occupational Injuries (CFOI) processes carries a multiple-fatality data field. This field is filled with blanks or zeros for single-fatality incidents. For multiple-fatality incidents, each jurisdiction participating in the CFOI assigns a natural number code to each fatality associated with each particular multiple-fatality incident in that jurisdiction during that year. This code must be unique within that jurisdiction for that year. As long as all work fatalities associated with an incident carry the same unique code, jurisdictions are generally free to choose their numbering system.

To illustrate, usually jurisdictions number their multiple-fatality incidents ordinally by date. For example, the three fatalities associated with the first multiple-fatality incident in a particular jurisdiction in a given year might be assigned the code "1"; the two associated with the next such incident might initially have been assigned the code "2," except that the jurisdiction later ascertained that one of the decedents was not in a work status and deleted the "2." By this time, however, an incident involving five decedents, four of whom later were confirmed as being in a work status, might already have been assigned the code "3." In that event, jurisdictions usually leave the "3" on the cases associated with this incident, even though there no longer would be any cases with the code "2."

For purposes of the analysis in this article, these codes were appended to the jurisdiction code and the year in order to create unique codes for each multiple-fatality incident. Nevertheless, because very little attention previously had been paid to the multiple-fatality phenomenon, a large number of errors had to be addressed. To identify these errors, cases were sorted by jurisdiction, date and time of incident, county of incident, age of decedent, and event or exposure category. For example, for those cases with a multiple-fatality code that had no corresponding associated fatality, either they had to be deleted (cases called "orphans") or matching codes had to be assigned to the associated fatality or fatalities that were missing them (cases called "widows"). Sometimes, blocks of cases had to be disentangled because jurisdictions had assigned the same code to cases from different multiple-fatality incidents.

Workplace Fatalities in Alaska

by Kevin Virden, Research Analyst, and Dean Rasmussen, Economist

Since fatalities census began, numbers have been declining

Alaska recorded 42 workplace fatalities in 2002. The previous year 64 workers were fatally injured. Since 1992, the year the Census of Fatal Occupational Injury (CFOI) program began, 653 workers have lost their lives in Alaska's workplaces, an average of one every six days. In more recent years, the number of fatalities has declined. From 1992 to 1996, Alaska averaged nearly 72 fatalities a year. From 1997 to 2002, that average has decreased to about 49 deaths annually. (See Exhibit 1.)

Nationally, 5,524 workers lost their lives on the job in 2002. This was down 6.6 percent from 2001 when 5,915 workers died of workplace-related injuries across the U.S. The 2001 national figure did not report the 2,886 workers who lost their lives from the terrorist events of September 11, 2001 in New York City, Washington, D.C. and Pennsylvania. (See Exhibit 2.)

Tracking workplace fatalities is important. Safety and health officials, employers, and researchers make extensive use of data to identify potential risks to workers, and facilitate efforts to prevent future fatalities.

CFOI reports inform workers of potential life-threatening hazards associated with various jobs. Enhanced job safety training promotes safer work practices. CFOI information can also be used to assess and improve workplace safety standards and identify new areas of safety research. Information gathered can be particularly useful to individual states in gauging progress over time towards the goal of reducing workplace fatalities in all industries.

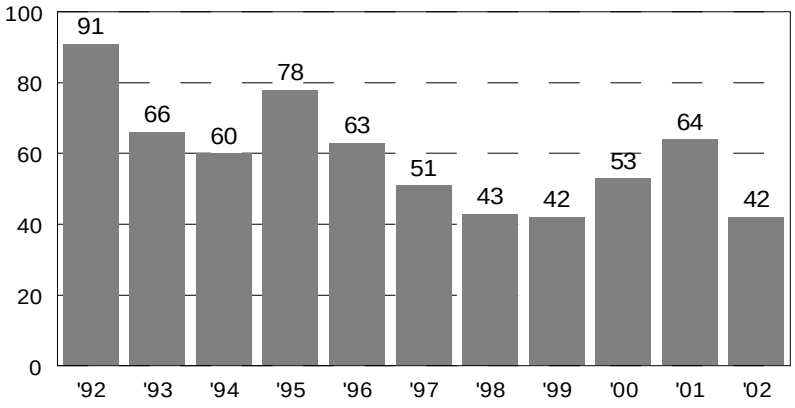
CFOI relies primarily on information found on death certificates, newspaper articles, and workers' compensation reports. The objective is to gather information about job-related fatalities (e.g., falls, transportation incidents) and illnesses that result in fatalities (e.g., asbestosis, some types of cancer). It includes any job-related death that occurs in Alaska, even if the individual involved was not a resident of the state or working for an Alaska company. All information identifiable with an individual is kept confidential.

Fatality rates higher in Alaska than U.S. overall

Although the annual number of workplace fatalities in Alaska is small when compared to the national number, the fatality rate, or number of cases per 100,000 workers, in 2002 was approximately three times higher than the national rate. The

Workplace Fatalities Decline 1992–2002

Census of Fatal Occupational Injuries



Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

national fatality rate has remained steady at about five fatal work injuries per 100,000 workers for much of the past decade. In 2002, however, the rate fell to its lowest ever at 4.0 fatalities per 100,000 workers. Alaska's workplace fatality rate in 2002 was 12.8 fatalities per 100,000 workers.

Alaska's fatality rate is the highest of the 50 states, but the rate has declined steadily between 1992 and 2002. To illustrate this, a regression of the fatality rates since 1992 presents a trend line sloping downward from 25 to about 13 cases per 100,000 workers. It's also worth noting how stable the U.S. rate of fatal injuries has been since 1992. (See Exhibit 4.)

The data presented in Exhibit 5 show that Alaska's workplace fatality rate is falling faster than the rates in most other states. A comparison of the 2002 incidence rates to the average rates for the period 1997 to 2001 places Alaska in eighth position among the states in the rate of improvement in reducing the workplace fatality rate.

An important consideration to keep in mind when interpreting individual state fatality rates is that fatal work injuries (the numerator in computing the rate) are based on the fatal work injury location, but employment (the denominator) is based on the state of residency.

While most workers live and work in the same state, some do not. Caution must be used in making universal assumptions that worker fatalities accurately reflect safety conditions in the states where the workplace injury occurs. For example, non-residents (those who legally reside outside of Alaska) who are fatally injured while working in Alaska could, in fact, drive up the state's fatality rate, as their numbers would not be captured in the employment estimated by the survey.

2 Workplace Fatality Counts
Alaska and U.S.

Year	Alaska	U.S.
2002	42	5,524
2001*	64	5,915
2000	53	5,920
1999	42	6,054
1998	43	6,055
1997	51	6,238
1996	63	6,202
1995	78	6,275
1994	60	6,632
1993	66	6,331
1992	91	6,217

* Excludes fatalities from September 11 attacks

Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section
U.S. Department of Labor, Bureau of Labor Statistics

3 Fatalities by Type of Event
Census of Fatal Occupational Injuries (CFOI) Alaska and U.S.

	Alaska										Alaska		U.S.	
	1992	1993	'94	1995	1996	1997	1998	1999	2000	2001	2002		2002	
Total	91	66	60	78	63	51	43	42	53	64	42	100%	5,524	100%
Transportation incidents	69	47	30	67	51	33	30	31	39	48	30	71%	2,381	43%
Highway incident	—	—	—	6	—	4	—	3	6	4	3	7%	1,372	25%
Water vehicle incident	39	21	14	22	29	8	14	16	12	25	18	43%	71	1%
Aircraft incident	26	22	10	34	16	19	13	10	19	18	8	19%	192	3%
Assaults and violent acts	4	12	6	3	6	6	7		3	5	—	—	840	15%
Contact with objects and equipment	10	4	9	4	4	6	—	5	8	5	6	14%	873	16%
Exposure to harmful substances or environments	3	—	7	—	—	3	—	—	—	4	—	—	538	10%

Event grouping is coded using the Bureau of Labor Statistics Occupational Injury and Illness classification structure. This is a select list and the parts will not sum to the total.

Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, and U.S. Bureau of Labor Statistics

Profile by type of incident or event and mode of travel

Transportation incidents were the most frequent type of event for worker deaths both in the U.S. and Alaska in 2002. On a nationwide basis, fatal highway accidents claimed the most individuals in work status, while in Alaska, water transportation and aircraft fatalities were most prevalent. In fact, there have been several years when the number of work-related highway fatalities in Alaska was too low to publish without jeopardizing confidentiality. Because of Alaska's remoteness and the lack of a road system in so many areas of the state, Alaska's workers travel by boat and airplane far more frequently than the workforce nationally. (See Exhibits 3 and 6.)

The second-leading cause of workplace fatalities nationally (third-leading cause in Alaska) was contact with objects and equipment (struck by falling object, caught in equipment or collapsing structure or materials). This type of fatality accounted for 16 percent of the worker fatalities nationally and 14 percent in Alaska.

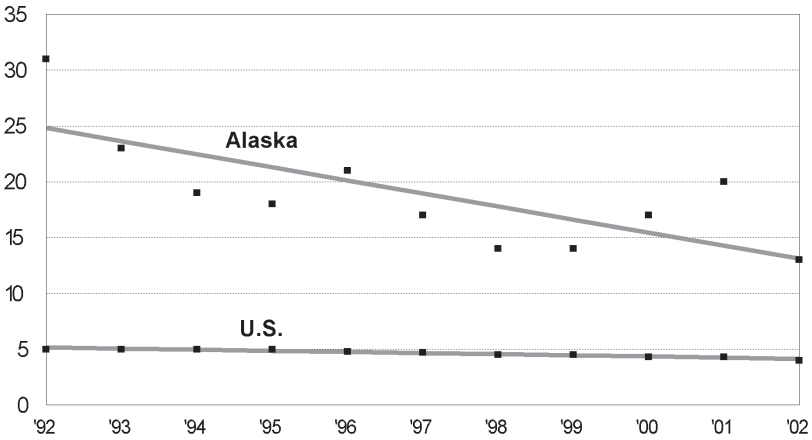
While assaults and other violent acts have decreased recently, they still represent a significant number of workplace deaths across the nation at about 15 percent. In Alaska's workplaces, fatal violent acts are far less common. (See Exhibit 3.)

Profile of fatal work injuries by industry

Throughout the period covered by the CFOI, the highest fatality counts have been in commercial fishing and air transportation. Exhibit 7 shows the broad industry groups which include these two industries.

Commercial fishing has been a leading source of work-related deaths in Alaska since CFOI's inception in 1992. Over that period, the fishing industry has accounted for 203 deaths, representing 31 percent of the CFOI total. While the number of deaths in fishing has varied widely from year to year, the trend since 1992 has been one of declining numbers. (See Exhibit 8.) Commercial fishing fatalities have gone from 35

Workplace Fatality Rates 4
11-year trend lines, Alaska & U.S.



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

Workplace Fatality Rates 5
By state, 2002 and 1997–2001

State	2002	1997-2001	State	2002	1997-2001
Massachusetts	1.4	2.0	North Carolina	4.3	5.5
Rhode Island	1.5	2.4	Utah	4.4	5.9
Connecticut	2.3	2.7	Florida	4.5	5.0
District of Columbia	2.5	5.7	Indiana	4.5	5.5
Delaware	2.7	3.3	Maine	4.6	3.9
California	2.8	3.6	Georgia	4.8	5.4
New Hampshire	2.8	2.5	Tennessee	5.0	5.7
Minnesota	2.9	2.8	Alabama	5.1	6.0
Washington	2.9	3.4	Colorado	5.3	5.0
New York City	3.0	3.2	West Virginia	5.3	7.2
New Jersey	3.1	2.7	Louisiana	5.5	7.2
Pennsylvania	3.1	3.9	Oklahoma	5.6	5.9
Wisconsin	3.1	3.7	South Carolina	5.8	6.2
Illinois	3.2	3.6	Idaho	6.1	7.1
Michigan	3.2	3.5	Missouri	6.2	5.1
Vermont	3.3	3.7	Arkansas	6.4	7.5
Iowa	3.5	4.7	Kansas	6.7	6.7
Hawaii	3.6	3.8	New Mexico	7.3	5.9
Maryland	3.6	2.9	North Dakota	7.6	8.3
Ohio	3.6	3.6	Mississippi	7.7	9.5
Oregon	3.7	3.8	Kentucky	7.8	6.4
Arizona	3.9	3.4	South Dakota	8.1	8.3
Virginia	3.9	4.4	Nebraska	9.0	6.4
U.S. Average	**4.0**	**N/A**	Montana	11.6	11.3
Texas	4.1	5.2	Wyoming	12.0	13.3
Nevada	4.3	5.3	**Alaska**	**12.8**	**16.7**

Source: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries

2002 Accident Investigations by Alaska Occupational Safety and Health

Construction

A welder was struck in the head by a dislodged plug while working on a pressurized pipe.

Logging

A logger was pinched between an uprooted tree and a broken chunk of log on the ground.

Retail

A fast food employee was crushed in a trash compactor.

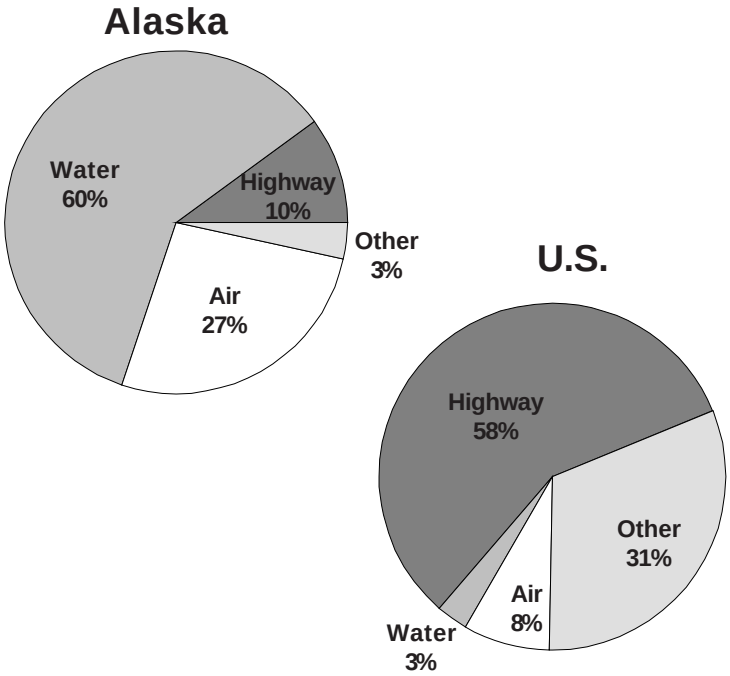
Trucking/Transportation

A trailer rolled over an employee who was trying to free up the trailer's frozen brakes. The employee was behind the tractor and trailer on a slope attempting to free the brakes. When the brakes released, the worker was run over.

An employee was crushed when a flatbed trailer fell on him. The worker was disconnecting two flatbed trailers stacked on top of each other and got in between them to untie a chain. When the chain was loosened, the top trailer slid and crushed him between the two trailers.

Source: Alaska Department of Labor and Workforce Development, Occupational Safety and Health

6 Transportation Fatalities
By mode of travel, 2002



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

in 1992 to 13 in 2002. Many of these deaths occur when several crewmembers are killed in a single vessel incident. Such an event occurred in 2001 when the F/V Arctic Rose sank off the west coast of Alaska and all 15 crewmembers perished.

The Commercial Fishing Industry Vessel Safety Act appears to be succeeding in decreasing fishing fatalities in Alaska. Nevertheless, commercial fishing continues to be one of the most hazardous industries in the state and nationwide.

Since the census began, aircraft crashes have been a principal cause of work-related fatalities in Alaska. Air transportation, which includes commercial air taxi and helicopter services, accounted for a 9.5 percent share of all worker fatalities in the state in 2002, and 36.4 percent of fatalities in the transportation industry.

In 2002 aviation fatalities reached their lowest number since the CFOI began, and the general trend toward fewer fatalities continues. (See Exhibit 9.) There were eight aircraft-related fatalities that year, four of which were in the air transportation industry. While the numbers are significant, this is far fewer than the high of 34 aviation-related fatalities in 1995.

A study done by the National Transportation Safety Board (NTSB) in 1980 identified three major factors in Alaska's high aircraft accident rates. These factors were inadequate airport facilities, insufficient ground navigational aids, and what it called "the bush syndrome" — pilots taking unwarranted risks in order to complete a flight.

The Federal Aviation Administration (FAA) has instituted several programs to improve Alaska's air safety. One voluntary program is the Medallion Foundation, where airlines are awarded "Medallion Status" by meeting standards that exceed the federal regulatory minimums. The FAA also created a "Circle of Safety" program that educates rural citizens on flight safety so that they can ensure stricter standards are met. Rural residents frequently commute by air between

communities. The FAA hopes that proper education will enable rural and bush residents to cope with air safety concerns that may arise.

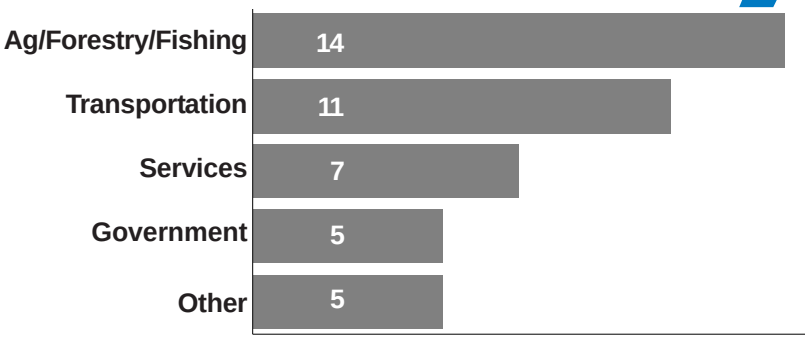
Perhaps the greatest hope of improving air travel safety in Alaska is the *Capstone Program.* This collaborative project involving the FAA, the NTSB, the National Weather Service, and the National Institute of Occupational Safety and Health began in 1998 in western rural Alaska. Capstone utilizes new technologies to better inform pilots of terrain, weather, and traffic in an aircraft's vicinity. By providing surveillance capabilities normally reserved for commercial airlines and higher performance aircraft, the FAA hopes to reduce aircraft accidents in Alaska. Considered a testing ground for the rest of the nation, Alaska was chosen to be the first area to experiment with these new technologies due to its high accident rates. The new technologies include global positioning system (GPS) data to transmit air traffic information, graphical and textual depictions of weather systems, and information broadcasting devices designed to inform pilots of nearby terrain conditions.

Fatal work injuries by occupation

All states reported fatal occupational injuries in 2002. In Alaska, fatal work injuries were more prevalent among workers who performed manual work than those who didn't. Farming, fishing, & forestry workers accounted for nearly forty percent of workplace fatalities despite making up less than one percent of the total workforce, self-employment included. All but one of the 15 fatalities in this occupational group were the result of commercial fishing related incidents. (See Exhibit 10.)

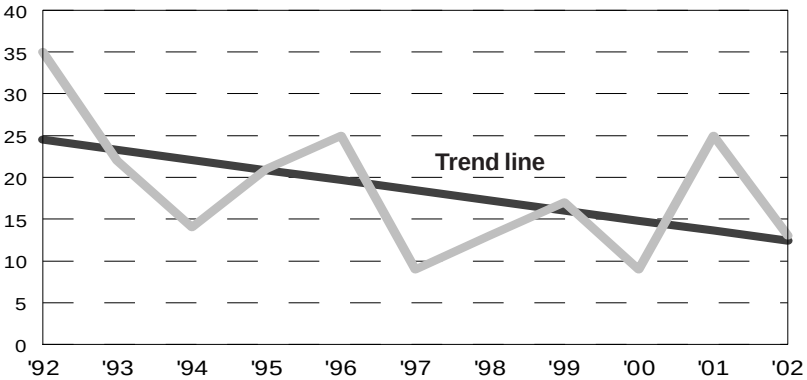
Falling or being struck by falling objects, drowning, and being crushed in confined areas are examples of hazards encountered by workers in Alaska. Climate and topography (e.g., extreme cold weather, water, slopes, sinkholes and other obstacles) also contribute to the occupational hazards.

Workplace Fatalities by Industry 7
Alaska 2002



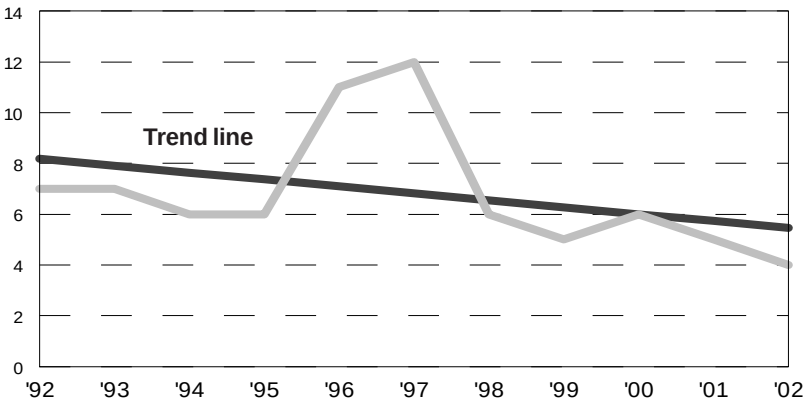
Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

Commercial Fishing Fatalities 8
Trend is declining



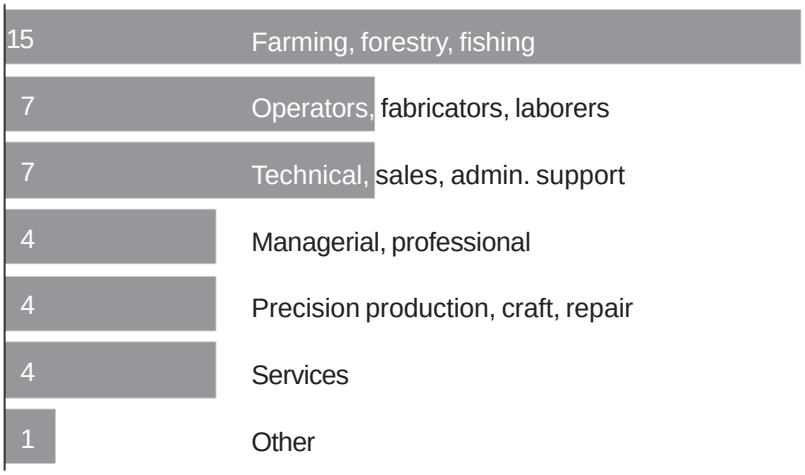
Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

Air Transportation Fatalities 9
Trend is declining



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

10 Alaska Workplace Fatalities
By occupation, 2002



Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section, U.S. Bureau of Labor Statistics

11 Worker Characteristics
Of Alaska's fatally injured, 2002

	Number	Percent
Total	42	100%
Employee Status		
Wage and Salary Workers [1]	30	71.4%
Self-employed [2]	12	28.6%
Sex		
Men	41	97.6%
Women	—	—
Age		
Under 16 years	—	—
16 to 17 years	—	—
18 to 19 years	—	—
20 to 24 years	4	9.5%
25 to 34 years	8	19.0%
35 to 44 years	12	28.6%
45 to 54 years	9	21.4%
55 to 64 years	3	7.1%
65 years and over	—	—
Race or Ethnic Origin		
White, non-Hispanic [3]	30	71.4%
Black, non-Hispanic [3]	—	—
Hispanic or Latino [3]	—	—
American Indian or Alaska Native	6	14.3%
Asian or Pacific Islander	—	—
Asian	—	—
Native Hawaiian or Pacific Islander	—	—

[1] May include volunteers and other workers receiving compensation.
[2] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[3] For years prior to 2000, the race categories White and Black include Hispanic workers. For years 2000 and later, White and Black exclude Hispanic workers.

Totals for major categories may include subcategories not shown separately.
Percentages may not add to totals because of rounding.
Dashes indicate no data reported or data that do not meet publication criteria.

Sources: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries

Profile of fatal work injuries by demographic characteristics

Men are more frequently employed in the more dangerous industries of aviation and fishing than women. The overwhelming majority of workplace fatalities in Alaska since 1992 have befallen white non-Hispanic males, and 2002 was no exception. White non-Hispanics accounted for 71.4 percent of the workplace fatalities. American Indian or Alaska Native accounted for an additional 14.3 percent. Of the 42 worker deaths reported in 2002, 41 were male. Since the CFOI program began, 96 percent of all CFOI victims have been male.

The age group with the most deaths was 35-44 with 12 fatalities, followed by those aged 45-54 with nine fatalities. Those aged 25-54 accounted for nearly 70 percent of Alaska's work related deaths in 2002. The majority of Alaska's fatalities occur to wage and salary employees, but 12 of the 42 deaths were self-employed workers. This relatively high number can be explained by the fact that fishermen are typically considered self-employed for purposes of the program. (See Exhibit 11.)

The workplace fatality census for 2003 is scheduled for release in late 2004.

Appendix A. National Data

A total of 5,575 fatal work injuries were recorded in 2003. The count for 2003 was the second lowest ever recorded by the fatality census since its inception in 1992 and was just 0.7 percent above the count for 2002.

Highway incidents remained the most frequent fatal event among workplace fatalities, accounting for 1,353 cases, or almost a quarter of all fatal work injuries in 2003. Even though the total number of fatal work injuries was higher in 2003, the number of fatal highway incidents decreased by 1 percent from a total of 1,373 in 2002. Homicides replaced falls to a lower level as the second most frequent fatal event in 2003. Of all workplace fatal injuries in 2003, a total of 632, or 11 percent, were homicides, an increase of 4 percent from 2002. Falls to a lower level was the third most frequent fatal event with a total of 604 workplace fatalities in 2003.

In 2003, the private construction industry recorded the highest number of fatal work injuries, accounting for 1,131 cases or one-fifth of all workplace fatalities in 2003. Transportation and material moving occupations recorded 1,393 fatalities in 2003, the most of any major occupational group, followed by construction and extraction occupations, with 1,038 fatalities.

Demographically, workplace fatality counts increased for all race and ethnicity groups except Hispanic or Latino workers. Fatal work injuries among Hispanic or Latino workers declined from 841 in 2002 to 794 in 2003, a decline of 6 percent.

Occupational fatalities to wage and salary workers were lower in 2003, declining 2 percent from the 4,481 recorded in 2002. Self-employed workers experienced the highest number of fatal injuries since 2000. A total of 1,170 fatalities were recorded for this group in 2003, up 11 percent from 2002. The increase in total workplace fatal injuries in 2003 was distributed proportionately between male and female workers. Fatal injuries sustained by young workers (aged 19 and under) increased by 3 percent from 2002 to 2003, largely due to a 56 percent increase in the fatal injuries sustained by workers under the age of 16. Fatalities to older workers (aged 55 and over) increased by 4 percent.

Fatal occupational injuries by year

Year	Total fatal injuries	
	Initial	Revised[1]
1992	6,083	6,217
1993	6,271	6,331
1994	6,588	6,632
1995	6,210	6,275
1996	6,112	6,202
1997	6,218	6,238
1998	6,026	6,055
1999	6,023	6,054
2000	5,915	5,920
2001[2]	5,900	5,915
2002	5,524	5,534
2003	5,559	5,575

[1] States are allowed a one-time revision after the initial total is published. This allows additional cases, identified after the initial publication deadline, to be included in the final (revised) total.

[2] The 2,886 work-related fatalities resulting from the September 11 terrorist attacks are not included in this tabulation.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Total		5,575	42.4	24.3	6.2	6.0	16.2	11.3	16.4	9.5	4.3
Private industry		5,043	40.8	23.2	6.6	5.5	15.9	11.1	17.5	10.1	4.6
Goods producing		2,401	33.7	13.7	10.9	5.5	5.8	2.5	25.6	14.0	7.1
Natural resources and mining		850	47.2	14.6	22.7	3.1	7.2	2.1	29.8	20.2	6.9
Agriculture, forestry, fishing and hunting	11	709	49.8	13.5	25.8	3.2	8.3	2.4	29.3	19.7	6.9
Crop production	111	334	58.1	15.0	38.0	3.9	5.7	2.7	25.1	13.5	6.3
Oilseed and grain farming	1111	35	42.9	11.4	25.7	–	–	–	37.1	–	14.3
Soybean farming	11111	3	–	–	–	–	–	–	–	–	–
Wheat farming	11114	5	80.0	–	–	–	–	–	–	–	–
Corn farming	11115	15	26.7	–	26.7	–	–	–	46.7	–	–
Rice farming	11116	3	100.0	–	–	–	–	–	–	–	–
Other grain farming	11119	4	–	–	–	–	–	–	–	–	–
Vegetable and melon farming	1112	17	41.2	17.6	17.6	–	–	–	29.4	–	17.6
Vegetable and melon farming	11121	17	41.2	17.6	17.6	–	–	–	29.4	–	17.6
Potato farming	111211	6	–	–	–	–	–	–	–	–	–
Other vegetable and melon farming	111219	6	–	–	–	–	–	–	50.0	–	–
Fruit and tree nut farming	1113	13	69.2	–	46.2	–	–	–	–	–	–
Noncitrus fruit and tree nut farming	11133	11	63.6	–	45.5	–	–	–	–	–	–
Grape vineyards	111332	3	100.0	–	–	–	–	–	–	–	–
Berry, except strawberry, farming	111334	3	100.0	–	–	–	–	–	–	–	–
Other noncitrus fruit farming	111339	3	–	–	–	–	–	–	–	–	–
Greenhouse and nursery production	1114	18	44.4	–	16.7	–	33.3	33.3	16.7	–	–
Food crops grown under cover	11141	3	–	–	–	–	–	–	–	–	–
Nursery and floriculture production	11142	13	46.2	–	23.1	–	38.5	38.5	–	–	–
Nursery and tree production	111421	12	50.0	–	25.0	–	41.7	41.7	–	–	–
Other crop farming	1119	77	66.2	15.6	46.8	–	3.9	–	24.7	16.9	6.5
Tobacco farming	11191	9	77.8	–	55.6	–	–	–	–	–	–
Cotton farming	11192	4	75.0	–	–	–	–	–	–	–	–
Sugarcane farming	11193	6	83.3	83.3	–	–	–	–	–	–	–
Hay farming	11194	11	72.7	–	54.5	–	–	–	27.3	–	–
All other crop farming	11199	44	61.4	–	52.3	–	6.8	–	29.5	20.5	6.8
All other miscellaneous crop farming	111998	43	62.8	–	53.5	–	7.0	–	27.9	20.9	–
Animal production	112	159	39.6	11.3	25.8	2.5	17.6	2.5	23.3	10.7	11.9
Cattle ranching and farming	1121	116	37.9	9.5	26.7	–	21.6	2.6	25.0	11.2	12.9
Beef cattle ranching, farming, and feedlots	11211	39	41.0	10.3	25.6	–	33.3	–	12.8	7.7	–
Beef cattle ranching and farming	112111	37	37.8	8.1	27.0	–	35.1	–	13.5	8.1	–
Dairy cattle and milk production	11212	56	32.1	8.9	23.2	–	12.5	–	33.9	10.7	21.4
Hog and pig farming	1122	9	–	–	–	–	–	–	33.3	–	–
Hog and pig farming	11221	9	–	–	–	–	–	–	33.3	–	–
Poultry and egg production	1123	7	42.9	–	–	–	–	–	–	–	–
Animal aquaculture	1125	5	60.0	–	–	–	–	–	–	–	–
Animal aquaculture	11251	5	60.0	–	–	–	–	–	–	–	–
Finfish farming and fish hatcheries	112511	4	75.0	–	–	–	–	–	–	–	–
Other animal production	1129	16	43.8	–	25.0	–	–	–	18.8	–	–
Apiculture	11291	4	–	–	–	–	–	–	–	–	–
Horses and other equine production	11292	9	55.6	–	44.4	–	–	–	–	–	–
Forestry and logging	113	120	25.0	10.0	9.2	4.2	–	–	68.3	64.2	4.2
Logging	1133	118	25.4	10.2	9.3	4.2	–	–	68.6	64.4	4.2
Logging	11331	118	25.4	10.2	9.3	4.2	–	–	68.6	64.4	4.2
Fishing, hunting and trapping	114	49	75.5	–	–	–	–	–	–	–	–
Fishing	1141	47	74.5	–	–	–	–	–	–	–	–
Fishing	11411	47	74.5	–	–	–	–	–	–	–	–
Finfish fishing	114111	8	62.5	–	–	–	–	–	–	–	–
Shellfish fishing	114112	22	72.7	–	–	–	–	–	–	–	–
Agriculture and forestry support activities	115	44	65.9	31.8	9.1	–	18.2	–	6.8	–	–
Support activities for crop production	1151	24	62.5	–	16.7	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Support activities for crop production	11511	24	62.5	–	16.7	–	–	–	–	–	–
Soil preparation, planting, and cultivating	115112	6	100.0	–	–	–	–	–	–	–	–
Crop harvesting, primarily by machine	115113	4	–	–	–	–	–	–	–	–	–
Other postharvest crop activities	115114	3	–	–	–	–	–	–	–	–	–
Farm labor contractors and crew leaders	115115	6	–	–	–	–	–	–	–	–	–
Support activities for animal production	1152	8	–	–	–	–	50.0	–	–	–	–
Support activities for animal production	11521	8	–	–	–	–	50.0	–	–	–	–
Support activities for forestry	1153	11	100.0	72.7	–	–	–	–	–	–	–
Support activities for forestry	11531	11	100.0	72.7	–	–	–	–	–	–	–
Mining[6]	21	141	34.0	19.9	7.1	2.1	–	–	31.9	22.7	7.1
Oil and gas extraction	211	17	52.9	23.5	–	–	–	–	17.6	–	–
Oil and gas extraction	2111	17	52.9	23.5	–	–	–	–	17.6	–	–
Oil and gas extraction	21111	17	52.9	23.5	–	–	–	–	17.6	–	–
Crude petroleum and natural gas extraction	211111	16	56.2	25.0	–	–	–	–	–	–	–
Mining, except oil and gas	212	55	30.9	5.5	18.2	5.5	–	–	34.5	20.0	10.9
Coal mining	2121	27	29.6	–	22.2	–	–	–	33.3	14.8	11.1
Coal mining	21211	27	29.6	–	22.2	–	–	–	33.3	14.8	11.1
Bituminous coal and lignite surface mining	212111	6	–	–	–	–	–	–	–	–	–
Bituminous coal underground mining	212112	19	26.3	–	–	–	–	–	31.6	15.8	–
Metal ore mining	2122	3	–	–	–	–	–	–	–	–	–
Nonmetallic mineral mining and quarrying	2123	24	33.3	–	16.7	–	–	–	37.5	25.0	12.5
Stone mining and quarrying	21231	10	–	–	–	–	–	–	50.0	40.0	–
Dimension stone mining and quarrying	212311	4	–	–	–	–	–	–	–	–	–
Crushed and broken limestone mining	212312	3	–	–	–	–	–	–	–	–	–
Other crushed and broken stone mining	212319	3	–	–	–	–	–	–	100.0	–	–
Sand, gravel, clay, and refractory mining	21232	13	46.2	–	23.1	–	–	–	30.8	–	–
Construction sand and gravel mining	212321	10	40.0	–	–	–	–	–	40.0	–	–
Support activities for mining	213	69	31.9	30.4	–	–	–	–	33.3	27.5	4.3
Support activities for mining	2131	69	31.9	30.4	–	–	–	–	33.3	27.5	4.3
Support activities for mining	21311	69	31.9	30.4	–	–	–	–	33.3	27.5	4.3
Drilling oil and gas wells	213111	26	19.2	19.2	–	–	–	–	50.0	34.6	11.5
Support activities for oil and gas operations	213112	42	40.5	38.1	–	–	–	–	23.8	23.8	–
Construction		1,131	25.6	12.8	4.2	7.4	3.3	1.5	20.4	9.8	3.6
Construction	23	1,131	25.6	12.8	4.2	7.4	3.3	1.5	20.4	9.8	3.6
Construction of buildings	236	227	22.5	11.0	6.2	2.6	5.7	3.1	17.2	6.2	4.4
Residential building construction	2361	129	24.8	11.6	7.8	–	6.2	4.7	16.3	4.7	3.1
Residential building construction	23611	129	24.8	11.6	7.8	–	6.2	4.7	16.3	4.7	3.1
New single-family general contractors	236115	57	29.8	15.8	7.0	–	–	–	17.5	10.5	–
New multifamily general contractors	236116	9	–	–	–	–	–	–	–	–	–
Residential remodelers	236118	29	–	–	–	–	20.7	17.2	13.8	–	–
Nonresidential building construction	2362	80	12.5	5.0	3.8	3.8	6.2	–	20.0	10.0	7.5
Industrial building construction	23621	19	–	–	–	–	–	–	15.8	–	–
Commercial building construction	23622	55	9.1	–	–	–	5.5	–	21.8	10.9	7.3
Heavy and civil engineering construction	237	247	36.4	11.7	4.9	18.2	–	–	32.0	16.6	4.9
Utility system construction	2371	131	20.6	13.7	–	4.6	–	–	40.5	20.6	5.3

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Water and sewer system construction	23711	66	18.2	7.6	–	6.1	–	–	59.1	30.3	6.1
Oil and gas pipeline construction	23712	15	40.0	40.0	–	–	–	–	20.0	20.0	–
Power and communication system construction	23713	49	16.3	14.3	–	–	–	–	22.4	8.2	6.1
Highway, street, and bridge construction	2373	95	54.7	11.6	5.3	37.9	–	–	24.2	13.7	3.2
Highway, street, and bridge construction	23731	95	54.7	11.6	5.3	37.9	–	–	24.2	13.7	3.2
Other heavy construction	2379	19	52.6	–	26.3	–	–	–	15.8	–	–
Other heavy construction	23799	19	52.6	–	26.3	–	–	–	15.8	–	–
Specialty trade contractors	238	629	21.5	12.7	3.2	5.1	3.3	1.4	17.5	8.6	3.0
Building foundation and exterior contractors	2381	228	14.5	8.8	1.3	4.4	2.2	1.8	17.1	10.1	2.6
Poured concrete structure contractors	23811	23	47.8	21.7	–	21.7	–	–	26.1	17.4	–
Residential poured foundation contractors	238111	5	–	–	–	–	–	–	–	–	–
Nonresidential poured foundation contractors	238112	5	60.0	–	–	–	–	–	–	–	–
Steel and precast concrete contractors	23812	37	8.1	8.1	–	–	–	–	21.6	16.2	–
Nonresidential structural steel contractors	238122	19	–	–	–	–	–	–	21.1	21.1	–
Framing contractors	23813	24	–	–	–	–	–	–	20.8	16.7	–
Residential framing contractors	238131	11	–	–	–	–	–	–	–	–	–
Masonry contractors	23814	36	25.0	22.2	–	–	–	–	30.6	16.7	8.3
Residential masonry contractors	238141	9	–	–	–	–	–	–	33.3	–	–
Nonresidential masonry contractors	238142	8	–	–	–	–	–	–	–	–	–
Glass and glazing contractors	23815	3	–	–	–	–	–	–	–	–	–
Roofing contractors	23816	76	6.6	3.9	–	–	3.9	3.9	5.3	–	–
Residential roofing contractors	238161	24	12.5	–	–	–	–	–	–	–	–
Nonresidential roofing contractors	238162	14	–	–	–	–	–	–	–	–	–
Siding contractors	23817	13	–	–	–	–	–	–	–	–	–
Other building exterior contractors	23819	15	–	–	–	–	–	–	33.3	–	–
Other residential exterior contractors	238191	3	–	–	–	–	–	–	–	–	–
Other nonresidential exterior contractors	238192	6	–	–	–	–	–	–	–	–	–
Building equipment contractors	2382	160	17.5	13.8	–	3.8	4.4	–	14.4	6.2	1.9
Electrical contractors	23821	79	10.1	8.9	–	–	3.8	–	10.1	5.1	–
Residential electrical contractors	238211	9	–	–	–	–	–	–	–	–	–
Nonresidential electrical contractors	238212	32	9.4	9.4	–	–	–	–	–	–	–
Plumbing and HVAC contractors	23822	69	27.5	21.7	–	5.8	5.8	–	18.8	5.8	–
Residential plumbing and HVAC contractors	238221	18	27.8	22.2	–	–	–	–	27.8	–	–
Nonresidential plumbing and HVAC contractors	238222	22	31.8	22.7	–	–	–	–	22.7	–	–
Other building equipment contractors	23829	11	–	–	–	–	–	–	–	–	–
Other nonresidential equipment contractors	238292	6	–	–	–	–	–	–	–	–	–
Building finishing contractors	2383	104	15.4	11.5	–	2.9	4.8	–	8.7	4.8	–
Drywall and insulation contractors	23831	22	–	–	–	–	–	–	–	–	–
Residential drywall contractors	238311	10	–	–	–	–	–	–	–	–	–
Painting and wall covering contractors	23832	55	–	–	–	–	–	–	7.3	5.5	–
Residential painting contractors	238321	17	–	–	–	–	–	–	–	–	–
Nonresidential painting contractors	238322	10	–	–	–	–	–	–	–	–	–
Flooring contractors	23833	5	80.0	–	–	–	–	–	–	–	–
Residential flooring contractors	238331	4	100.0	–	–	–	–	–	–	–	–
Tile and terrazzo contractors	23834	6	–	–	–	–	–	–	–	–	–
Finish carpentry contractors	23835	10	40.0	30.0	–	–	–	–	–	–	–
Other building finishing contractors	23839	4	–	–	–	–	–	–	–	–	–
Other specialty trade contractors	2389	128	43.0	19.5	11.7	9.4	3.1	–	30.5	12.5	6.2
Site preparation contractors	23891	84	38.1	11.9	14.3	9.5	3.6	–	39.3	13.1	8.3
Residential site preparation contractors	238911	14	28.6	–	–	–	–	–	42.9	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Nonresidential site preparation contractors	238912	32	25.0	15.6	–	–	–	–	43.8	15.6	9.4
All other specialty trade contractors	23899	44	52.3	34.1	6.8	9.1	–	–	13.6	11.4	–
All other residential trade contractors	238991	13	61.5	53.8	–	–	–	–	–	–	–
All other nonresidential trade contractors	238992	9	33.3	–	–	–	–	–	–	–	–
Manufacturing		420	27.9	14.5	5.0	5.5	9.8	6.0	31.0	12.4	16.7
Manufacturing	31-33	420	27.9	14.5	5.0	5.5	9.8	6.0	31.0	12.4	16.7
Food manufacturing	311	59	28.8	13.6	5.1	10.2	6.8	6.8	27.1	8.5	16.9
Animal food manufacturing	3111	4	–	–	–	–	–	–	–	–	–
Animal food manufacturing	31111	4	–	–	–	–	–	–	–	–	–
Other animal food manufacturing	311119	3	–	–	–	–	–	–	–	–	–
Grain and oilseed milling	3112	5	–	–	–	–	–	–	–	–	–
Fruit and vegetable preserving and specialty	3114	5	–	–	–	–	–	–	–	–	–
Fruit and vegetable canning and drying	31142	4	–	–	–	–	–	–	–	–	–
Fruit and vegetable canning	311421	4	–	–	–	–	–	–	–	–	–
Dairy product manufacturing	3115	6	50.0	–	–	–	–	–	–	–	–
Dairy product, except frozen, manufacturing	31151	5	–	–	–	–	–	–	–	–	–
Fluid milk manufacturing	311511	5	–	–	–	–	–	–	–	–	–
Animal slaughtering and processing	3116	19	26.3	–	–	–	–	–	26.3	15.8	–
Animal slaughtering and processing	31161	19	26.3	–	–	–	–	–	26.3	15.8	–
Meat processed from carcasses	311612	5	–	–	–	–	–	–	–	–	–
Poultry processing	311615	10	30.0	–	–	–	–	–	30.0	–	–
Bakeries and tortilla manufacturing	3118	8	62.5	50.0	–	–	–	–	–	–	–
Bread and bakery product manufacturing	31181	6	66.7	50.0	–	–	–	–	–	–	–
Commercial bakeries	311812	4	75.0	75.0	–	–	–	–	–	–	–
Other food manufacturing	3119	8	–	–	–	–	–	–	50.0	–	50.0
Seasoning and dressing manufacturing	31194	3	–	–	–	–	–	–	–	–	–
Spice and extract manufacturing	311942	3	–	–	–	–	–	–	–	–	–
All other food manufacturing	31199	3	–	–	–	–	–	–	–	–	–
Beverage and tobacco product manufacturing	312	6	100.0	83.3	–	–	–	–	–	–	–
Beverage manufacturing	3121	6	100.0	83.3	–	–	–	–	–	–	–
Soft drink and ice manufacturing	31211	6	100.0	83.3	–	–	–	–	–	–	–
Soft drink manufacturing	312111	6	100.0	83.3	–	–	–	–	–	–	–
Textile mills	313	7	42.9	–	–	–	–	–	–	–	–
Fabric mills	3132	4	–	–	–	–	–	–	–	–	–
Broadwoven fabric mills	31321	4	–	–	–	–	–	–	–	–	–
Wood product manufacturing	321	37	21.6	16.2	–	–	8.1	–	56.8	18.9	35.1
Sawmills and wood preservation	3211	18	–	–	–	–	–	–	77.8	33.3	44.4
Sawmills and wood preservation	32111	18	–	–	–	–	–	–	77.8	33.3	44.4
Sawmills	321113	16	–	–	–	–	–	–	81.2	37.5	43.8
Plywood and engineered wood product mfg.	3212	7	–	–	–	–	–	–	57.1	–	42.9
Plywood and engineered wood product mfg.	32121	7	–	–	–	–	–	–	57.1	–	42.9
Truss manufacturing	321214	5	–	–	–	–	–	–	–	–	–
Other wood product manufacturing	3219	12	33.3	33.3	–	–	–	–	25.0	–	–
Millwork	32191	5	–	–	–	–	–	–	–	–	–
Wood container and pallet manufacturing	32192	4	–	–	–	–	–	–	–	–	–
All other wood product manufacturing	32199	3	–	–	–	–	–	–	–	–	–
Paper manufacturing	322	17	29.4	–	–	–	–	–	35.3	–	29.4
Pulp, paper, and paperboard mills	3221	9	33.3	–	–	–	–	–	44.4	–	44.4

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Paper mills	32212	8	37.5	–	–	–	–	–	37.5	–	37.5
Paper, except newsprint, mills	322121	3	–	–	–	–	–	–	–	–	–
Newsprint mills	322122	3	–	–	–	–	–	–	–	–	–
Converted paper product manufacturing	3222	8	–	–	–	–	–	–	–	–	–
Paperboard container manufacturing	32221	5	–	–	–	–	–	–	–	–	–
Corrugated and solid fiber box manufacturing	322211	3	–	–	–	–	–	–	–	–	–
Printing and related support activities	323	7	–	–	–	–	–	–	–	–	–
Printing and related support activities	3231	7	–	–	–	–	–	–	–	–	–
Printing	32311	6	–	–	–	–	–	–	–	–	–
Commercial lithographic printing	32311	6	–	–	–	–	–	–	–	–	–
Chemical manufacturing	325	28	32.1	10.7	–	–	–	–	10.7	–	–
Basic chemical manufacturing	3251	5	–	–	–	–	–	–	–	–	–
Petrochemical manufacturing	32511	3	–	–	–	–	–	–	–	–	–
Resin, rubber, and artificial fibers mfg.	3252	4	–	–	–	–	–	–	–	–	–
Resin and synthetic rubber manufacturing	32521	4	–	–	–	–	–	–	–	–	–
Plastics material and resin manufacturing	325211	4	–	–	–	–	–	–	–	–	–
Soap, cleaning compound, and toiletry mfg.	3256	4	–	–	–	–	–	–	–	–	–
Soap and cleaning compound manufacturing	32561	3	–	–	–	–	–	–	–	–	–
Other chemical product and preparation mfg.	3259	12	–	–	–	–	–	–	–	–	–
All other chemical preparation manufacturing	32599	10	–	–	–	–	–	–	–	–	–
Other miscellaneous chemical product mfg.	325998	9	–	–	–	–	–	–	–	–	–
Plastics and rubber products manufacturing	326	26	23.1	15.4	–	–	–	–	19.2	–	15.4
Plastics product manufacturing	3261	18	22.2	16.7	–	–	–	–	27.8	–	22.2
Plastics packaging materials, film and sheet	32611	3	–	–	–	–	–	–	–	–	–
Other plastics product manufacturing	32619	8	–	–	–	–	–	–	–	–	–
All other plastics product manufacturing	326199	6	–	–	–	–	–	–	–	–	–
Rubber product manufacturing	3262	8	–	–	–	–	–	–	–	–	–
Other rubber product manufacturing	32629	5	–	–	–	–	–	–	–	–	–
Rubber product mfg. for mechanical use	326291	5	–	–	–	–	–	–	–	–	–
Nonmetallic mineral product manufacturing	327	46	39.1	26.1	6.5	6.5	–	–	32.6	15.2	15.2
Clay product and refractory manufacturing	3271	3	–	–	–	–	–	–	–	–	–
Glass and glass product manufacturing	3272	3	–	–	–	–	–	–	–	–	–
Glass and glass product manufacturing	32721	3	–	–	–	–	–	–	–	–	–
Cement and concrete product manufacturing	3273	29	55.2	37.9	–	10.3	–	–	37.9	13.8	20.7
Ready-mix concrete manufacturing	32732	20	70.0	50.0	–	–	–	–	25.0	–	15.0
Concrete pipe, brick, and block manufacturing	32733	4	–	–	–	–	–	–	75.0	–	–
Other concrete product manufacturing	32739	4	–	–	–	–	–	–	75.0	–	–
Other nonmetallic mineral products	3279	11	–	–	–	–	–	–	–	–	–
All other nonmetallic mineral products mfg.	32799	11	–	–	–	–	–	–	–	–	–
Mineral wool manufacturing	327993	8	–	–	–	–	–	–	–	–	–
Primary metal manufacturing	331	33	18.2	–	–	9.1	–	–	57.6	21.2	33.3
Iron and steel mills and ferroalloy mfg.	3311	9	33.3	–	–	–	–	–	66.7	33.3	33.3
Iron and steel mills and ferroalloy mfg.	33111	9	33.3	–	–	–	–	–	66.7	33.3	33.3
Iron and steel mills	331111	8	–	–	–	–	–	–	75.0	37.5	37.5
Steel product mfg. from purchased steel	3312	6	–	–	–	–	–	–	66.7	–	50.0
Alumina and aluminum production	3313	4	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Alumina and aluminum production	33131	4	–	–	–	–	–	–	–	–	–
Foundries	3315	12	–	–	–	–	–	–	50.0	–	33.3
Ferrous metal foundries	33151	10	–	–	–	–	–	–	40.0	–	–
Iron foundries	331511	3	–	–	–	–	–	–	–	–	–
Steel foundries, except investment	331513	7	–	–	–	–	–	–	–	–	–
Fabricated metal product manufacturing	332	43	11.6	–	–	–	–	–	46.5	30.2	16.3
Forging and stamping	3321	5	–	–	–	–	–	–	80.0	60.0	–
Forging and stamping	33211	5	–	–	–	–	–	–	80.0	60.0	–
Metal stamping	332116	3	–	–	–	–	–	–	–	–	–
Architectural and structural metals mfg.	3323	17	17.6	–	–	–	–	–	35.3	17.6	17.6
Plate work and fabricated structural products	33231	11	–	–	–	–	–	–	45.5	–	27.3
Fabricated structural metal manufacturing	332312	6	–	–	–	–	–	–	–	–	–
Plate work manufacturing	332313	4	–	–	–	–	–	–	–	–	–
Ornamental and architectural metal products	33232	5	–	–	–	–	–	–	–	–	–
Machine shops and threaded product mfg.	3327	6	–	–	–	–	–	–	50.0	–	–
Machine shops	33271	6	–	–	–	–	–	–	50.0	–	–
Coating, engraving, and heat treating metals	3328	4	–	–	–	–	–	–	–	–	–
Coating, engraving, and heat treating metals	33281	4	–	–	–	–	–	–	–	–	–
Machinery manufacturing	333	26	38.5	15.4	–	–	15.4	–	30.8	19.2	–
Ag., construction, and mining machinery mfg.	3331	6	50.0	–	–	–	–	–	–	–	–
Industrial machinery manufacturing	3332	3	–	–	–	–	–	–	–	–	–
Other industrial machinery manufacturing	33329	3	–	–	–	–	–	–	–	–	–
All other industrial machinery manufacturing	333298	3	–	–	–	–	–	–	–	–	–
HVAC and commercial refrigeration equipment	3334	3	–	–	–	–	–	–	–	–	–
HVAC and commercial refrigeration equipment	33341	3	–	–	–	–	–	–	–	–	–
AC, refrigeration, and forced air heating	333415	3	–	–	–	–	–	–	–	–	–
Other general purpose machinery manufacturing	3339	11	45.5	–	–	–	–	–	–	–	–
Material handling equipment manufacturing	33392	8	50.0	–	–	–	–	–	–	–	–
Conveyor and conveying equipment mfg.	333922	4	–	–	–	–	–	–	–	–	–
Computer and electronic product manufacturing	334	11	–	–	–	–	–	–	36.4	–	–
Semiconductor and electronic component mfg.	3344	3	–	–	–	–	–	–	–	–	–
Semiconductor and electronic component mfg.	33441	3	–	–	–	–	–	–	–	–	–
Electronic instrument manufacturing	3345	5	–	–	–	–	–	–	–	–	–
Electromedical apparatus manufacturing	33451	5	–	–	–	–	–	–	–	–	–
Electrical equipment and appliance mfg.	335	5	–	–	–	–	–	–	–	–	–
Transportation equipment manufacturing	336	44	18.2	6.8	6.8	–	34.1	25.0	15.9	6.8	6.8
Motor vehicle manufacturing	3361	4	–	–	–	–	–	–	–	–	–
Automobile and light truck manufacturing	33611	4	–	–	–	–	–	–	–	–	–
Automobile manufacturing	336111	3	–	–	–	–	–	–	–	–	–
Motor vehicle body and trailer manufacturing	3362	5	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Motor vehicle body and trailer manufacturing	33621	5	–	–	–	–	–	–	–	–	–
Motor vehicle body manufacturing	336211	4	–	–	–	–	–	–	–	–	–
Motor vehicle parts manufacturing	3363	14	–	–	–	–	50.0	35.7	–	–	–
Other motor vehicle parts manufacturing	33639	8	–	–	–	–	75.0	–	–	–	–
All other motor vehicle parts manufacturing	336399	8	–	–	–	–	75.0	–	–	–	–
Aerospace product and parts manufacturing	3364	13	30.8	–	–	–	61.5	46.2	–	–	–
Aerospace product and parts manufacturing	33641	13	30.8	–	–	–	61.5	46.2	–	–	–
Aircraft manufacturing	336411	4	75.0	–	–	–	–	–	–	–	–
Other aircraft parts and equipment	336413	8	–	–	–	–	87.5	75.0	–	–	–
Ship and boat building	3366	6	–	–	–	–	–	–	–	–	–
Ship and boat building	33661	6	–	–	–	–	–	–	–	–	–
Ship building and repairing	336611	5	–	–	–	–	–	–	–	–	–
Furniture and related product manufacturing	337	9	55.6	44.4	–	–	–	–	–	–	–
Household and institutional furniture mfg.	3371	8	50.0	–	–	–	–	–	–	–	–
Other household and institutional furniture	33712	6	–	–	–	–	–	–	–	–	–
Miscellaneous manufacturing	339	7	–	–	–	–	–	–	–	–	–
Other miscellaneous manufacturing	3399	5	–	–	–	–	–	–	–	–	–
Service providing		2,642	47.3	31.8	2.7	5.5	25.1	19.0	10.3	6.7	2.4
Trade, transportation, and utilities		1,375	58.7	42.0	2.1	6.4	21.7	18.0	9.2	5.9	2.3
Wholesale trade	42	191	48.2	40.8	1.6	3.1	12.0	7.9	20.9	12.0	5.2
Merchant wholesalers, durable goods	423	102	40.2	32.4	–	3.9	15.7	9.8	28.4	19.6	6.9
Motor vehicle and parts merchant wholesalers	4231	16	25.0	25.0	–	–	–	–	37.5	37.5	–
New motor vehicle parts merchant wholesalers	42312	3	–	–	–	–	–	–	–	–	–
Used motor vehicle parts merchant wholesalers	42314	8	–	–	–	–	–	–	37.5	37.5	–
Furniture and furnishing merchant wholesalers	4232	5	–	–	–	–	–	–	–	–	–
Home furnishing merchant wholesalers	42322	4	–	–	–	–	–	–	–	–	–
Lumber and const. supply merchant wholesalers	4233	10	60.0	40.0	–	–	–	–	–	–	–
Masonry material merchant wholesalers	42332	7	57.1	42.9	–	–	–	–	–	–	–
Commercial equip. merchant wholesalers	4234	11	54.5	45.5	–	–	27.3	–	–	–	–
Office equipment merchant wholesalers	42342	5	80.0	80.0	–	–	–	–	–	–	–
Medical equipment merchant wholesalers	42345	4	–	–	–	–	–	–	–	–	–
Metal and mineral merchant wholesalers	4235	3	–	–	–	–	–	–	100.0	100.0	–
Metal merchant wholesalers	42351	3	–	–	–	–	–	–	100.0	100.0	–
Electric goods merchant wholesalers	4236	6	50.0	50.0	–	–	–	–	–	–	–
Elec. equip. and wiring merchant wholesalers	42361	4	–	–	–	–	–	–	–	–	–
Machinery and supply merchant wholesalers	4238	26	46.2	38.5	–	–	–	–	30.8	19.2	–
Construction equipment merchant wholesalers	42381	5	–	–	–	–	–	–	–	–	–
Farm and garden equip. merchant wholesalers	42382	6	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Industrial machinery merchant wholesalers	42383	11	45.5	36.4	–	–	–	–	45.5	–	–
Service estab. equip. merchant wholesalers	42385	3	–	–	–	–	–	–	–	–	–
Misc. durable goods merchant wholesalers	4239	24	33.3	20.8	–	–	16.7	12.5	41.7	20.8	20.8
Recyclable material merchant wholesalers	42393	21	33.3	19.0	–	–	14.3	–	42.9	19.0	23.8
Merchant wholesalers, nondurable goods	424	81	58.0	50.6	3.7	–	6.2	3.7	12.3	–	3.7
Druggists goods merchant wholesalers	4242	3	100.0	100.0	–	–	–	–	–	–	–
Druggists goods merchant wholesalers	42421	3	100.0	100.0	–	–	–	–	–	–	–
Grocery and related product wholesalers	4244	25	84.0	68.0	–	–	–	–	–	–	–
General line grocery merchant wholesalers	42441	9	77.8	55.6	–	–	–	–	–	–	–
Packaged frozen food merchant wholesalers	42442	4	100.0	100.0	–	–	–	–	–	–	–
Other grocery product merchant wholesalers	42449	7	100.0	100.0	–	–	–	–	–	–	–
Farm product raw material merch. whls.	4245	16	–	–	–	–	–	–	37.5	–	–
Grain and field bean merchant wholesalers	42451	15	–	–	–	–	–	–	40.0	–	–
Petroleum merchant wholesalers	4247	15	73.3	73.3	–	–	–	–	–	–	–
Other petroleum merchant wholesalers	42472	13	76.9	76.9	–	–	–	–	–	–	–
Alcoholic beverage merchant wholesalers	4248	5	–	–	–	–	–	–	–	–	–
Beer and ale merchant wholesalers	42481	3	–	–	–	–	–	–	–	–	–
Misc. nondurable goods merchant wholesalers	4249	14	64.3	50.0	–	–	–	–	–	–	–
Farm supplies merchant wholesalers	42491	7	42.9	42.9	–	–	–	–	–	–	–
Nursery and florist merchant wholesalers	42493	3	100.0	–	–	–	–	–	–	–	–
Electronic markets and agents and brokers	425	7	42.9	42.9	–	–	–	–	–	–	–
Electronic markets and agents and brokers	4251	7	42.9	42.9	–	–	–	–	–	–	–
Wholesale trade agents and brokers	42512	6	50.0	50.0	–	–	–	–	–	–	–
Retail trade	44-45	344	23.8	17.4	2.0	2.3	57.3	50.0	7.3	4.1	2.3
Motor vehicle and parts dealers	441	67	40.3	31.3	–	–	34.3	25.4	13.4	9.0	4.5
Automobile dealers	4411	26	57.7	57.7	–	–	23.1	19.2	11.5	–	–
New car dealers	44111	12	66.7	66.7	–	–	–	–	25.0	–	–
Used car dealers	44112	5	–	–	–	–	60.0	–	–	–	–
Other motor vehicle dealers	4412	14	21.4	–	–	–	57.1	35.7	–	–	–
Motorcycle, boat, and other vehicle dealers	44122	12	25.0	–	–	–	66.7	41.7	–	–	–
Motorcycle dealers	441221	6	–	–	–	–	83.3	83.3	–	–	–
Boat dealers	441222	5	–	–	–	–	60.0	–	–	–	–
Auto parts, accessories, and tire stores	4413	27	33.3	22.2	–	–	33.3	25.9	14.8	11.1	–
Automotive parts and accessories stores	44131	18	44.4	33.3	–	–	22.2	22.2	16.7	–	–
Tire dealers	44132	9	–	–	–	–	55.6	–	–	–	–
Furniture and home furnishings stores	442	8	–	–	–	–	37.5	–	–	–	–
Furniture stores	4421	4	–	–	–	–	–	–	–	–	–
Furniture stores	44211	4	–	–	–	–	–	–	–	–	–
Home furnishings stores	4422	4	–	–	–	–	–	–	–	–	–
Floor covering stores	44221	3	–	–	–	–	–	–	–	–	–
Electronics and appliance stores	443	5	–	–	–	–	60.0	–	–	–	–
Electronics and appliance stores	4431	5	–	–	–	–	60.0	–	–	–	–
Building material and garden supply stores	444	34	47.1	26.5	14.7	–	17.6	11.8	14.7	–	8.8
Building material and supplies dealers	4441	23	39.1	26.1	–	–	17.4	–	17.4	–	13.0
Home centers	44411	4	–	–	–	–	–	–	–	–	–
Hardware stores	44413	4	–	–	–	–	–	–	–	–	–
Other building material dealers	44419	14	50.0	42.9	–	–	–	–	21.4	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Lawn and garden equipment and supplies stores	4442	11	63.6	27.3	36.4	–	–	–	–	–	–
Nursery, garden, and farm supply stores	44422	9	66.7	33.3	33.3	–	–	–	–	–	–
Food and beverage stores	445	99	5.1	3.0	–	–	85.9	81.8	–	–	–
Grocery stores	4451	80	3.8	–	–	–	85.0	83.8	–	–	–
Supermarkets and other grocery stores	44511	33	–	–	–	–	66.7	66.7	–	–	–
Convenience stores	44512	40	–	–	–	–	97.5	97.5	–	–	–
Specialty food stores	4452	10	–	–	–	–	90.0	80.0	–	–	–
Fruit and vegetable markets	44523	3	–	–	–	–	100.0	100.0	–	–	–
Beer, wine, and liquor stores	4453	8	–	–	–	–	87.5	75.0	–	–	–
Beer, wine, and liquor stores	44531	8	–	–	–	–	87.5	75.0	–	–	–
Health and personal care stores	446	7	57.1	42.9	–	–	42.9	–	–	–	–
Health and personal care stores	4461	7	57.1	42.9	–	–	42.9	–	–	–	–
Pharmacies and drug stores	44611	3	–	–	–	–	–	–	–	–	–
Gasoline stations	447	42	16.7	9.5	–	–	78.6	71.4	–	–	–
Gasoline stations	4471	42	16.7	9.5	–	–	78.6	71.4	–	–	–
Gasoline stations with convenience stores	44711	35	14.3	11.4	–	–	82.9	74.3	–	–	–
Other gasoline stations	44719	5	–	–	–	–	–	–	–	–	–
Clothing and clothing accessories stores	448	16	–	–	–	–	81.2	68.8	–	–	–
Clothing stores	4481	8	–	–	–	–	62.5	62.5	–	–	–
Other clothing stores	44819	3	–	–	–	–	–	–	–	–	–
Jewelry, luggage, and leather goods stores	4483	8	–	–	–	–	100.0	75.0	–	–	–
Jewelry stores	44831	8	–	–	–	–	100.0	75.0	–	–	–
Sporting goods, hobby, book and music stores	451	5	–	–	–	–	60.0	–	–	–	–
Sporting goods and musical instrument stores	4511	3	–	–	–	–	–	–	–	–	–
General merchandise stores	452	11	–	–	–	–	54.5	54.5	–	–	–
Department stores	4521	7	–	–	–	–	57.1	57.1	–	–	–
Department stores	45211	7	–	–	–	–	57.1	57.1	–	–	–
Other general merchandise stores	4529	4	–	–	–	–	–	–	–	–	–
All other general merchandise stores	45299	3	–	–	–	–	–	–	–	–	–
Miscellaneous store retailers	453	25	16.0	16.0	–	–	52.0	44.0	20.0	12.0	–
Florists	4531	5	60.0	60.0	–	–	–	–	–	–	–
Florists	45311	5	60.0	60.0	–	–	–	–	–	–	–
Office supplies, stationery, and gift stores	4532	3	–	–	–	–	100.0	100.0	–	–	–
Gift, novelty, and souvenir stores	45322	3	–	–	–	–	100.0	100.0	–	–	–
Used merchandise stores	4533	7	–	–	–	–	42.9	–	–	–	–
Used merchandise stores	45331	7	–	–	–	–	42.9	–	–	–	–
Other miscellaneous store retailers	4539	10	–	–	–	–	50.0	40.0	30.0	–	–
All other miscellaneous store retailers	45399	8	–	–	–	–	62.5	50.0	–	–	–
Tobacco stores	453991	3	–	–	–	–	100.0	100.0	–	–	–
Store retailers not specified elsewhere	453998	5	–	–	–	–	–	–	–	–	–
Nonstore retailers	454	22	72.7	59.1	–	–	18.2	18.2	–	–	–
Direct selling establishments	4543	20	70.0	55.0	–	–	20.0	20.0	–	–	–
Fuel dealers	45431	11	72.7	45.5	–	–	–	–	–	–	–
Heating oil dealers	454311	5	80.0	–	–	–	–	–	–	–	–
Liquefied petroleum gas, bottled gas, dealers	454312	4	–	–	–	–	–	–	–	–	–
Other direct selling establishments	45439	8	62.5	62.5	–	–	37.5	37.5	–	–	–
Transportation and warehousing	48-49	808	77.0	53.6	2.2	8.9	9.4	7.4	7.2	5.2	1.4
Air transportation	481	52	100.0	–	–	–	–	–	–	–	–
Scheduled air transportation	4811	12	100.0	–	–	–	–	–	–	–	–
Scheduled air transportation	48111	12	100.0	–	–	–	–	–	–	–	–
Scheduled passenger air transportation	481111	7	100.0	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Nonscheduled air transportation	4812	40	100.0	–	–	–	–	–	–	–	–
Nonscheduled air transportation	48121	40	100.0	–	–	–	–	–	–	–	–
Nonscheduled air passenger chartering	481211	23	100.0	–	–	–	–	–	–	–	–
Nonscheduled air freight chartering	481212	7	100.0	–	–	–	–	–	–	–	–
Other nonscheduled air transportation	481219	7	100.0	–	–	–	–	–	–	–	–
Rail transportation	482	18	72.2	–	–	27.8	–	–	16.7	–	–
Rail transportation	4821	18	72.2	–	–	27.8	–	–	16.7	–	–
Rail transportation	48211	18	72.2	–	–	27.8	–	–	16.7	–	–
Line-haul railroads	482111	9	66.7	–	–	–	–	–	–	–	–
Water transportation	483	24	50.0	–	–	–	12.5	–	20.8	–	–
Sea, coastal, and Great Lakes transportation	4831	18	55.6	–	–	–	16.7	–	16.7	–	–
Sea, coastal, and Great Lakes transportation	48311	18	55.6	–	–	–	16.7	–	16.7	–	–
Deep sea freight transportation	483111	10	–	–	–	–	30.0	–	30.0	–	–
Deep sea passenger transportation	483112	8	100.0	–	–	–	–	–	–	–	–
Inland water transportation	4832	6	–	–	–	–	–	–	–	–	–
Inland water transportation	48321	6	–	–	–	–	–	–	–	–	–
Inland water freight transportation	483211	5	–	–	–	–	–	–	–	–	–
Truck transportation	484	517	84.5	72.9	1.2	8.1	3.9	2.1	6.2	4.8	0.8
General freight trucking	4841	363	84.8	73.3	–	9.6	4.4	2.8	4.4	3.6	–
General freight trucking, local	48411	42	76.2	69.0	–	7.1	–	–	9.5	–	–
General freight trucking, long-distance	48412	293	85.7	73.4	–	10.2	4.4	2.7	3.8	3.8	–
General freight trucking, long-distance TL	484121	212	84.4	72.6	–	9.9	4.2	2.8	4.2	4.2	–
General freight trucking, long-distance LTL	484122	36	91.7	72.2	–	13.9	–	–	–	–	–
Specialized freight trucking	4842	128	81.2	70.3	2.3	3.9	3.1	–	11.7	9.4	–
Used household and office goods moving	48421	11	81.8	72.7	–	–	–	–	–	–	–
Other specialized trucking, local	48422	66	74.2	63.6	–	–	–	–	18.2	15.2	–
Other specialized trucking, long-distance	48423	48	91.7	79.2	–	–	–	–	–	–	–
Transit and ground passenger transportation	485	74	29.7	28.4	–	–	64.9	62.2	–	–	–
Urban transit systems	4851	3	100.0	–	–	–	–	–	–	–	–
Urban transit systems	48511	3	100.0	–	–	–	–	–	–	–	–
Taxi and limousine service	4853	59	18.6	18.6	–	–	79.7	78.0	–	–	–
Taxi service	48531	55	18.2	18.2	–	–	81.8	80.0	–	–	–
Limousine service	48532	3	–	–	–	–	–	–	–	–	–
Charter bus industry	4855	5	60.0	60.0	–	–	–	–	–	–	–
Charter bus industry	48551	5	60.0	60.0	–	–	–	–	–	–	–
Other ground passenger transportation	4859	6	83.3	83.3	–	–	–	–	–	–	–
Other ground passenger transportation	48599	6	83.3	83.3	–	–	–	–	–	–	–
Special needs transportation	485991	5	80.0	80.0	–	–	–	–	–	–	–
Scenic and sightseeing transportation	487	9	88.9	–	–	–	–	–	–	–	–
Scenic and sightseeing transportation, other	4879	5	100.0	–	–	–	–	–	–	–	–
Scenic and sightseeing transportation, other	48799	5	100.0	–	–	–	–	–	–	–	–
Support activities for transportation	488	66	71.2	21.2	–	30.3	7.6	4.5	10.6	6.1	4.5
Support activities for air transportation	4881	7	85.7	–	–	–	–	–	–	–	–
Other support activities for air transport.	48819	7	85.7	–	–	–	–	–	–	–	–
Support activities for water transportation	4883	17	47.1	–	–	–	–	–	17.6	–	–
Marine cargo handling	48832	7	–	–	–	–	–	–	42.9	–	–
Navigational services to shipping	48833	6	50.0	–	–	–	–	–	–	–	–
Other support activities for water transport.	48839	3	–	–	–	–	–	–	–	–	–
Support activities for road transportation	4884	39	79.5	33.3	–	43.6	7.7	–	7.7	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Motor vehicle towing	48841	28	82.1	32.1	–	46.4	–	–	–	–	–
Other support activities for road transport.	48849	11	72.7	36.4	–	36.4	–	–	–	–	–
Couriers and messengers	492	22	90.9	72.7	–	–	–	–	–	–	–
Couriers	4921	17	88.2	64.7	–	–	–	–	–	–	–
Couriers	49211	17	88.2	64.7	–	–	–	–	–	–	–
Local messengers and local delivery	4922	5	100.0	100.0	–	–	–	–	–	–	–
Local messengers and local delivery	49221	5	100.0	100.0	–	–	–	–	–	–	–
Warehousing and storage	493	23	43.5	–	39.1	–	–	–	30.4	21.7	–
Warehousing and storage	4931	23	43.5	–	39.1	–	–	–	30.4	21.7	–
General warehousing and storage	49311	18	44.4	–	44.4	–	–	–	33.3	27.8	–
Utilities	22	32	34.4	21.9	–	–	9.4	–	12.5	–	–
Utilities	221	32	34.4	21.9	–	–	9.4	–	12.5	–	–
Power generation and supply	2211	22	22.7	13.6	–	–	13.6	–	13.6	–	–
Electric power generation	22111	8	–	–	–	–	–	–	–	–	–
Fossil fuel electric power generation	221112	5	–	–	–	–	–	–	–	–	–
Electric power transmission and distribution	22112	14	35.7	21.4	–	–	–	–	–	–	–
Electric power distribution	221122	10	50.0	30.0	–	–	–	–	–	–	–
Natural gas distribution	2212	3	100.0	–	–	–	–	–	–	–	–
Natural gas distribution	22121	3	100.0	–	–	–	–	–	–	–	–
Water, sewage and other systems	2213	6	50.0	–	–	–	–	–	–	–	–
Information		64	60.9	46.9	–	9.4	12.5	10.9	–	–	–
Information	51	64	60.9	46.9	–	9.4	12.5	10.9	–	–	–
Publishing industries, except Internet	511	31	80.6	64.5	–	12.9	–	–	–	–	–
Newspaper, book, and directory publishers	5111	29	82.8	65.5	–	13.8	–	–	–	–	–
Newspaper publishers	51111	27	81.5	66.7	–	14.8	–	–	–	–	–
Motion picture and sound recording industries	512	5	–	–	–	–	–	–	–	–	–
Motion picture and video industries	5121	3	–	–	–	–	–	–	–	–	–
Broadcasting, except Internet	515	3	–	–	–	–	–	–	–	–	–
Radio and television broadcasting	5151	3	–	–	–	–	–	–	–	–	–
Telecommunications	517	21	47.6	33.3	–	–	19.0	14.3	–	–	–
Wired telecommunications carriers	5171	13	61.5	46.2	–	–	–	–	–	–	–
Wired telecommunications carriers	51711	13	61.5	46.2	–	–	–	–	–	–	–
Cable and other program distribution	5175	4	–	–	–	–	–	–	–	–	–
Cable and other program distribution	51751	4	–	–	–	–	–	–	–	–	–
ISPs, search portals, and data processing	518	3	–	–	–	–	–	–	–	–	–
Data processing and related services	5182	3	–	–	–	–	–	–	–	–	–
Data processing and related services	51821	3	–	–	–	–	–	–	–	–	–
Financial activities		129	35.7	25.6	2.3	3.9	37.2	27.9	7.8	3.9	3.1
Finance and insurance	52	45	48.9	35.6	–	–	35.6	28.9	–	–	–
Credit intermediation and related activities	522	27	29.6	25.9	–	–	55.6	48.1	–	–	–
Depository credit intermediation	5221	11	45.5	45.5	–	–	45.5	36.4	–	–	–
Commercial banking	52211	9	55.6	55.6	–	–	33.3	33.3	–	–	–
Nondepository credit intermediation	5222	13	23.1	–	–	–	53.8	46.2	–	–	–
Other nondepository credit intermediation	52229	12	25.0	–	–	–	58.3	50.0	–	–	–
Real estate credit	522292	6	–	–	–	–	–	–	–	–	–
All other nondepository credit intermediation	522298	6	–	–	–	–	83.3	66.7	–	–	–
Activities related to credit intermediation	5223	3	–	–	–	–	100.0	100.0	–	–	–
Other credit intermediation activities	52239	3	–	–	–	–	100.0	100.0	–	–	–
Securities, commodity contracts, investments	523	6	66.7	–	–	–	–	–	–	–	–
Other financial investment activities	5239	4	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Investment advice	52393	3	–	–	–	–	–	–	–	–	–
Insurance carriers and related activities	524	11	81.8	54.5	–	–	–	–	–	–	–
Insurance carriers	5241	5	80.0	–	–	–	–	–	–	–	–
Insurance agencies, brokerages, and related	5242	5	80.0	60.0	–	–	–	–	–	–	–
Insurance agencies and brokerages	52421	4	75.0	–	–	–	–	–	–	–	–
Real estate and rental and leasing	53	84	28.6	20.2	3.6	4.8	38.1	27.4	9.5	4.8	4.8
Real estate	531	52	17.3	11.5	–	–	48.1	34.6	–	–	–
Lessors of real estate	5311	21	–	–	–	–	47.6	38.1	–	–	–
Lessors of residential buildings	53111	17	–	–	–	–	52.9	41.2	–	–	–
Lessors of nonresidential buildings	53112	3	–	–	–	–	–	–	–	–	–
Offices of real estate agents and brokers	5312	13	30.8	23.1	–	–	69.2	53.8	–	–	–
Offices of real estate agents and brokers	53121	13	30.8	23.1	–	–	69.2	53.8	–	–	–
Activities related to real estate	5313	17	23.5	–	–	–	35.3	17.6	–	–	–
Real estate property managers	53131	17	23.5	–	–	–	35.3	17.6	–	–	–
Residential property managers	531311	10	–	–	–	–	40.0	–	–	–	–
Nonresidential property managers	531312	4	–	–	–	–	–	–	–	–	–
Rental and leasing services	532	31	45.2	32.3	–	–	22.6	16.1	22.6	12.9	9.7
Automotive equipment rental and leasing	5321	6	100.0	83.3	–	–	–	–	–	–	–
Truck, trailer, and RV rental and leasing	53212	4	100.0	75.0	–	–	–	–	–	–	–
Consumer goods rental	5322	6	50.0	50.0	–	–	–	–	–	–	–
Video tape and disc rental	53223	3	–	–	–	–	–	–	–	–	–
General rental centers	5323	4	–	–	–	–	–	–	–	–	–
General rental centers	53231	4	–	–	–	–	–	–	–	–	–
Machinery and equipment rental and leasing	5324	12	–	–	–	–	25.0	25.0	50.0	25.0	25.0
Heavy machinery rental and leasing	53241	8	–	–	–	–	–	–	62.5	37.5	–
Other heavy machinery rental and leasing	532412	8	–	–	–	–	–	–	62.5	37.5	–
Other machinery rental and leasing	53249	4	–	–	–	–	–	–	–	–	–
Professional and business services		453	38.2	22.5	3.8	5.5	12.8	6.8	18.3	13.2	3.8
Professional and technical services	54	97	53.6	24.7	–	4.1	24.7	8.2	3.1	–	–
Professional and technical services	541	97	53.6	24.7	–	4.1	24.7	8.2	3.1	–	–
Legal services	5411	14	28.6	21.4	–	–	50.0	–	–	–	–
Offices of lawyers	54111	9	–	–	–	–	55.6	–	–	–	–
Other legal services	54119	5	–	–	–	–	–	–	–	–	–
All other legal services	541199	4	–	–	–	–	–	–	–	–	–
Accounting and bookkeeping services	5412	8	–	–	–	–	62.5	–	–	–	–
Accounting and bookkeeping services	54121	8	–	–	–	–	62.5	–	–	–	–
Offices of certified public accountants	541211	5	–	–	–	–	60.0	–	–	–	–
Architectural and engineering services	5413	26	65.4	30.8	–	11.5	–	–	11.5	–	–
Architectural services	54131	6	66.7	–	–	–	–	–	–	–	–
Engineering services	54133	10	80.0	50.0	–	–	–	–	–	–	–
Specialized design services	5414	5	–	–	–	–	–	–	–	–	–
Computer systems design and related services	5415	10	80.0	40.0	–	–	–	–	–	–	–
Computer systems design and related services	54151	10	80.0	40.0	–	–	–	–	–	–	–
Custom computer programming services	541511	4	75.0	–	–	–	–	–	–	–	–
Management and technical consulting services	5416	12	100.0	50.0	–	–	–	–	–	–	–
Management consulting services	54161	10	100.0	40.0	–	–	–	–	–	–	–
Scientific research and development services	5417	8	–	–	–	–	50.0	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Physical, engineering and biological research	54171	8	–	–	–	–	50.0	–	–	–	–
Advertising and related services	5418	5	–	–	–	–	–	–	–	–	–
Display advertising	54185	3	–	–	–	–	–	–	–	–	–
Other professional and technical services	5419	9	–	–	–	–	55.6	–	–	–	–
Veterinary services	54194	5	–	–	–	–	60.0	–	–	–	–
Administrative and waste services	56	356	34.0	21.9	4.5	5.9	9.6	6.5	22.5	16.3	4.5
Administrative and support services	561	265	26.4	17.4	5.3	2.6	12.5	8.3	22.6	18.5	2.6
Facilities support services	5612	4	–	–	–	–	–	–	–	–	–
Facilities support services	56121	4	–	–	–	–	–	–	–	–	–
Employment services	5613	19	21.1	15.8	–	–	26.3	26.3	21.1	–	–
Temporary help services	56132	13	–	–	–	–	38.5	38.5	23.1	–	–
Professional employer organizations	56133	6	50.0	–	–	–	–	–	–	–	–
Business support services	5614	7	57.1	42.9	–	–	42.9	–	–	–	–
Business service centers	56143	3	100.0	–	–	–	–	–	–	–	–
Private mail centers	561431	3	100.0	–	–	–	–	–	–	–	–
Other business support services	56149	4	–	–	–	–	75.0	–	–	–	–
Repossession services	561491	3	–	–	–	–	–	–	–	–	–
Investigation and security services	5616	35	34.3	28.6	–	–	42.9	37.1	–	–	–
Security and armored car services	56161	35	34.3	28.6	–	–	42.9	37.1	–	–	–
Security guards and patrol services	561612	31	32.3	25.8	–	–	45.2	38.7	–	–	–
Armored car services	561613	3	–	–	–	–	–	–	–	–	–
Services to buildings and dwellings	5617	189	23.8	13.2	6.9	2.1	4.2	1.6	28.6	24.3	2.1
Janitorial services	56172	20	15.0	–	–	–	15.0	–	–	–	–
Landscaping services	56173	154	24.0	12.3	7.8	2.6	2.6	–	33.1	29.2	2.6
Other services to buildings and dwellings	56179	11	27.3	–	–	–	–	–	–	–	–
Other support services	5619	7	57.1	57.1	–	–	–	–	–	–	–
All other support services	56199	7	57.1	57.1	–	–	–	–	–	–	–
Waste management and remediation services	562	91	56.0	35.2	–	15.4	–	–	22.0	9.9	9.9
Waste collection	5621	58	60.3	34.5	–	17.2	–	–	29.3	15.5	12.1
Waste collection	56211	58	60.3	34.5	–	17.2	–	–	29.3	15.5	12.1
Solid waste collection	562111	45	57.8	33.3	–	17.8	–	–	31.1	15.6	13.3
Hazardous waste collection	562112	6	83.3	83.3	–	–	–	–	–	–	–
Other waste collection	562119	4	–	–	–	–	–	–	–	–	–
Waste treatment and disposal	5622	15	53.3	33.3	–	20.0	–	–	–	–	–
Waste treatment and disposal	56221	15	53.3	33.3	–	20.0	–	–	–	–	–
Hazardous waste treatment and disposal	562211	3	–	–	–	–	–	–	–	–	–
Solid waste landfill	562212	7	71.4	42.9	–	–	–	–	–	–	–
Other nonhazardous waste disposal	562219	4	–	–	–	–	–	–	–	–	–
Remediation and other waste services	5629	17	41.2	35.3	–	–	–	–	–	–	–
Remediation services	56291	5	–	–	–	–	–	–	–	–	–
Materials recovery facilities	56292	3	–	–	–	–	–	–	–	–	–
All other waste management services	56299	9	55.6	55.6	–	–	–	–	–	–	–
Septic tank and related services	562991	5	100.0	100.0	–	–	–	–	–	–	–
Miscellaneous waste management services	562998	4	–	–	–	–	–	–	–	–	–
Educational and health services		143	55.2	23.8	–	4.9	18.9	9.8	3.5	–	2.1
Educational services	61	41	78.0	7.3	–	–	–	–	–	–	–
Educational services	611	41	78.0	7.3	–	–	–	–	–	–	–
Elementary and secondary schools	6111	4	–	–	–	–	–	–	–	–	–
Elementary and secondary schools	61111	4	–	–	–	–	–	–	–	–	–
Colleges and universities	6113	3	–	–	–	–	–	–	–	–	–
Colleges and universities	61131	3	–	–	–	–	–	–	–	–	–
Technical and trade schools	6115	27	100.0	–	–	–	–	–	–	–	–
Technical and trade schools	61151	27	100.0	–	–	–	–	–	–	–	–
Flight training	611512	27	100.0	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Other schools and instruction	6116	3	–	–	–	–	–	–	–	–	–
Sports and recreation instruction	61162	3	–	–	–	–	–	–	–	–	–
Health care and social assistance	62	102	46.1	30.4	–	6.9	24.5	12.7	3.9	–	–
Ambulatory health care services	621	36	50.0	38.9	–	–	25.0	8.3	–	–	–
Offices of physicians	6211	7	–	–	–	–	42.9	–	–	–	–
Offices of physicians	62111	7	–	–	–	–	42.9	–	–	–	–
Offices of physicians, except mental health	621111	3	–	–	–	–	–	–	–	–	–
Offices of dentists	6212	5	–	–	–	–	60.0	–	–	–	–
Offices of dentists	62121	5	–	–	–	–	60.0	–	–	–	–
Outpatient care centers	6214	6	–	–	–	–	–	–	–	–	–
Other outpatient care centers	62149	5	–	–	–	–	–	–	–	–	–
Home health care services	6216	8	62.5	62.5	–	–	–	–	–	–	–
Home health care services	62161	8	62.5	62.5	–	–	–	–	–	–	–
Other ambulatory health care services	6219	9	88.9	44.4	–	–	–	–	–	–	–
Ambulance services	62191	6	83.3	–	–	–	–	–	–	–	–
All other ambulatory health care services	62199	3	100.0	100.0	–	–	–	–	–	–	–
Hospitals	622	24	41.7	20.8	–	–	20.8	–	–	–	–
General medical and surgical hospitals	6221	24	41.7	20.8	–	–	20.8	–	–	–	–
General medical and surgical hospitals	62211	24	41.7	20.8	–	–	20.8	–	–	–	–
Nursing and residential care facilities	623	20	20.0	15.0	–	–	40.0	35.0	–	–	–
Nursing care facilities	6231	7	–	–	–	–	42.9	42.9	–	–	–
Nursing care facilities	62311	7	–	–	–	–	42.9	42.9	–	–	–
Residential mental health facilities	6232	3	–	–	–	–	–	–	–	–	–
Community care facilities for the elderly	6233	7	–	–	–	–	–	–	–	–	–
Community care facilities for the elderly	62331	7	–	–	–	–	–	–	–	–	–
Continuing care retirement communities	623311	3	–	–	–	–	–	–	–	–	–
Homes for the elderly	623312	4	–	–	–	–	–	–	–	–	–
Social assistance	624	20	65.0	35.0	–	30.0	15.0	–	–	–	–
Individual and family services	6241	7	85.7	71.4	–	–	–	–	–	–	–
Other individual and family services	62419	3	100.0	100.0	–	–	–	–	–	–	–
Vocational rehabilitation services	6243	5	–	–	–	–	–	–	–	–	–
Vocational rehabilitation services	62431	5	–	–	–	–	–	–	–	–	–
Child day care services	6244	6	83.3	–	–	66.7	–	–	–	–	–
Child day care services	62441	6	83.3	–	–	66.7	–	–	–	–	–
Leisure and hospitality		275	21.8	9.5	6.2	3.3	54.2	40.4	4.0	1.8	1.1
Arts, entertainment, and recreation	71	88	34.1	6.8	15.9	3.4	29.5	3.4	10.2	5.7	3.4
Performing arts and spectator sports	711	42	45.2	11.9	26.2	–	35.7	–	–	–	–
Performing arts companies	7111	6	–	–	–	–	–	–	–	–	–
Musical groups and artists	71113	5	–	–	–	–	–	–	–	–	–
Spectator sports	7112	25	48.0	–	40.0	–	36.0	–	–	–	–
Spectator sports	71121	25	48.0	–	40.0	–	36.0	–	–	–	–
Racetracks	711212	5	60.0	–	–	–	–	–	–	–	–
Other spectator sports	711219	19	47.4	–	47.4	–	36.8	–	–	–	–
Independent artists, writers, and performers	7115	8	–	–	–	–	62.5	–	–	–	–
Independent artists, writers, and performers	71151	8	–	–	–	–	62.5	–	–	–	–
Museums, historical sites, zoos, and parks	712	6	–	–	–	–	50.0	–	–	–	–
Museums, historical sites, zoos, and parks	7121	6	–	–	–	–	50.0	–	–	–	–
Amusements, gambling, and recreation	713	40	22.5	–	7.5	–	20.0	7.5	17.5	7.5	7.5
Amusement parks and arcades	7131	8	–	–	–	–	–	–	–	–	–
Amusement and theme parks	71311	8	–	–	–	–	–	–	–	–	–
Other amusement and recreation industries	7139	31	25.8	–	9.7	–	16.1	–	22.6	9.7	9.7

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Golf courses and country clubs	71391	9	33.3	–	–	–	–	–	–	–	–
Fitness and recreational sports centers	71394	4	–	–	–	–	–	–	–	–	–
All other amusement and recreation industries	71399	13	30.8	–	–	–	–	–	23.1	–	–
Accommodation and food services	72	187	16.0	10.7	1.6	3.2	65.8	57.8	–	–	–
Accommodation	721	40	25.0	12.5	7.5	–	50.0	35.0	–	–	–
Traveler accommodation	7211	28	17.9	10.7	–	–	57.1	42.9	–	–	–
Hotels and motels, except casino hotels	72111	24	20.8	12.5	–	–	58.3	41.7	–	–	–
Casino hotels	72112	3	–	–	–	–	–	–	–	–	–
RV parks and recreational camps	7212	11	45.5	–	–	–	–	–	–	–	–
RV parks and recreational camps	72121	11	45.5	–	–	–	–	–	–	–	–
RV parks and campgrounds	721211	6	50.0	–	–	–	–	–	–	–	–
Recreational and vacation camps	721214	5	–	–	–	–	–	–	–	–	–
Food services and drinking places	722	146	13.0	10.3	–	2.1	70.5	64.4	–	–	–
Full-service restaurants	7221	39	12.8	–	–	–	66.7	56.4	–	–	–
Full-service restaurants	72211	39	12.8	–	–	–	66.7	56.4	–	–	–
Limited-service eating places	7222	61	13.1	11.5	–	–	78.7	72.1	–	–	–
Limited-service eating places	72221	61	13.1	11.5	–	–	78.7	72.1	–	–	–
Limited-service restaurants	722211	51	13.7	11.8	–	–	78.4	70.6	–	–	–
Snack and nonalcoholic beverage bars	722213	5	–	–	–	–	80.0	80.0	–	–	–
Special food services	7223	12	41.7	41.7	–	–	41.7	41.7	–	–	–
Food service contractors	72231	6	83.3	83.3	–	–	–	–	–	–	–
Mobile food services	72233	6	–	–	–	–	83.3	83.3	–	–	–
Drinking places, alcoholic beverages	7224	33	–	–	–	–	72.7	69.7	–	–	–
Drinking places, alcoholic beverages	72241	33	–	–	–	–	72.7	69.7	–	–	–
Other services, except public administration		194	21.1	17.0	1.5	2.1	37.1	28.4	16.5	11.3	3.1
Other services, except public administration	81	194	21.1	17.0	1.5	2.1	37.1	28.4	16.5	11.3	3.1
Repair and maintenance	811	121	13.2	9.1	2.5	–	32.2	24.8	24.8	18.2	4.1
Automotive repair and maintenance	8111	87	11.5	8.0	–	–	37.9	28.7	24.1	17.2	4.6
Automotive mechanical and electrical repair	81111	57	7.0	–	–	–	43.9	31.6	24.6	17.5	5.3
General automotive repair	811111	45	8.9	–	–	–	35.6	22.2	26.7	20.0	6.7
Other automotive mechanical and elec. repair	811118	9	–	–	–	–	88.9	77.8	–	–	–
Automotive body, interior, and glass repair	81112	15	20.0	–	–	–	40.0	33.3	20.0	–	–
Automotive body and interior repair	811121	14	–	–	–	–	42.9	35.7	21.4	–	–
Other automotive repair and maintenance	81119	10	30.0	30.0	–	–	–	–	–	–	–
Car washes	811192	3	–	–	–	–	–	–	–	–	–
All other automotive repair and maintenance	811198	6	–	–	–	–	–	–	–	–	–
Electronic equipment repair and maintenance	8112	5	–	–	–	–	60.0	60.0	–	–	–
Electronic equipment repair and maintenance	81121	5	–	–	–	–	60.0	60.0	–	–	–
Consumer electronics repair and maintenance	811211	3	–	–	–	–	100.0	100.0	–	–	–
Commercial machinery repair and maintenance	8113	19	–	–	–	–	–	–	26.3	21.1	–
Commercial machinery repair and maintenance	81131	19	–	–	–	–	–	–	26.3	21.1	–
Household goods repair and maintenance	8114	8	–	–	–	–	–	–	37.5	–	–

See footnotes at end of table.

TABLE A-1. **Fatal occupational injuries by industry and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)								
			Transportation incidents				Assaults and violent acts		Contact with object and equipment		
			Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Home and garden equip. and appliance repair	81141	4	–	–	–	–	–	–	75.0	–	–
Other household goods repair and maintenance	81149	4	–	–	–	–	–	–	–	–	–
Personal and laundry services	812	42	28.6	26.2	–	–	54.8	45.2	–	–	–
Personal care services	8121	10	–	–	–	–	80.0	80.0	–	–	–
Hair, nail, and skin care services	81211	8	–	–	–	–	75.0	75.0	–	–	–
Barber shops	812111	4	–	–	–	–	100.0	100.0	–	–	–
Death care services	8122	8	37.5	37.5	–	–	–	–	–	–	–
Funeral homes and funeral services	81221	4	–	–	–	–	–	–	–	–	–
Cemeteries and crematories	81222	4	–	–	–	–	–	–	–	–	–
Drycleaning and laundry services	8123	16	18.8	18.8	–	–	62.5	56.2	–	–	–
Coin-operated laundries and drycleaners	81231	6	–	–	–	–	100.0	100.0	–	–	–
Drycleaning and laundry services	81232	7	–	–	–	–	57.1	42.9	–	–	–
Linen and uniform supply	81233	3	–	–	–	–	–	–	–	–	–
Other personal services	8129	8	62.5	50.0	–	–	37.5	–	–	–	–
Pet care, except veterinary, services	81291	4	–	–	–	–	–	–	–	–	–
Membership associations and organizations	813	30	43.3	36.7	–	–	30.0	16.7	–	–	–
Religious organizations	8131	17	41.2	41.2	–	–	29.4	–	–	–	–
Religious organizations	81311	17	41.2	41.2	–	–	29.4	–	–	–	–
Civic and social organizations	8134	7	–	–	–	–	57.1	42.9	–	–	–
Civic and social organizations	81341	7	–	–	–	–	57.1	42.9	–	–	–
Professional and similar organizations	8139	4	100.0	75.0	–	–	–	–	–	–	–
Labor unions and similar labor organizations	81393	3	100.0	–	–	–	–	–	–	–	–
Government[7]		532	57.7	34.6	2.6	11.3	18.8	13.3	5.3	3.8	0.8
Federal government		98	57.1	19.4	–	–	15.3	3.1	8.2	6.1	–
State government		102	64.7	37.3	2.9	19.6	16.7	12.7	–	–	–
Local government		326	54.9	38.7	2.8	11.7	20.9	16.9	5.5	3.7	.9

[1] Classified according to the North American Industry Classification System, 2002.
[2] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[3] Includes highway, nonhighway, air, water, and rail fatalities.
[4] "Highway" includes deaths to vehicle occupants resulting from traffic incidents that occur on the public roadway, shoulder, or surrounding area. It excludes incidents occurring entirely off the roadway, such as in parking lots and on farms; incidents involving trains; and deaths to pedestrians or other non-passengers.
[5] Includes violence by persons, self-inflicted injury, and assaults by animals.
[6] Includes fatalities at all establishments categorized as Mining (Sector 21) in the North American Industry Classification System, 2002, including establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.
[7] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 9 fatalities for which there was insufficient information to determine a specific industry classification, though a distinction between private and government was made for each.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Total		5,575	12.5	10.8	8.7	4.4	2.2	3.6
Private industry		5,043	13.1	11.6	8.8	4.6	2.2	3.6
Goods producing		2,401	18.6	17.5	11.6	7.1	2.2	4.6
Natural resources and mining		850	5.2	4.2	6.5	1.9	1.4	4.1
Agriculture, forestry, fishing and hunting	11	709	4.8	3.7	6.3	1.3	1.7	1.4
Crop production	111	334	5.1	4.5	5.1	2.1	1.5	.9
Oilseed and grain farming	1111	35	8.6	8.6	8.6	–	–	–
Soybean farming	11111	3	–	–	–	–	–	–
Wheat farming	11114	5	–	–	–	–	–	–
Corn farming	11115	15	–	–	–	–	–	–
Rice farming	11116	3	–	–	–	–	–	–
Other grain farming	11119	4	–	–	–	–	–	–
Vegetable and melon farming	1112	17	–	–	–	–	–	–
Vegetable and melon farming	11121	17	–	–	–	–	–	–
Potato farming	111211	6	–	–	–	–	–	–
Other vegetable and melon farming	111219	6	–	–	–	–	–	–
Fruit and tree nut farming	1113	13	–	–	–	–	–	–
Noncitrus fruit and tree nut farming	11133	11	–	–	–	–	–	–
Grape vineyards	111332	3	–	–	–	–	–	–
Berry, except strawberry, farming	111334	3	–	–	–	–	–	–
Other noncitrus fruit farming	111339	3	–	–	–	–	–	–
Greenhouse and nursery production	1114	18	–	–	–	–	–	–
Food crops grown under cover	11141	3	–	–	–	–	–	–
Nursery and floriculture production	11142	13	–	–	–	–	–	–
Nursery and tree production	111421	12	–	–	–	–	–	–
Other crop farming	1119	77	–	–	3.9	–	–	–
Tobacco farming	11191	9	–	–	–	–	–	–
Cotton farming	11192	4	–	–	–	–	–	–
Sugarcane farming	11193	6	–	–	–	–	–	–
Hay farming	11194	11	–	–	–	–	–	–
All other crop farming	11199	44	–	–	–	–	–	–
All other miscellaneous crop farming	111998	43	–	–	–	–	–	–
Animal production	112	159	8.2	5.7	9.4	–	3.1	1.9
Cattle ranching and farming	1121	116	7.8	4.3	6.0	–	–	–
Beef cattle ranching, farming, and feedlots	11211	39	10.3	7.7	–	–	–	–
Beef cattle ranching and farming	112111	37	10.8	8.1	–	–	–	–
Dairy cattle and milk production	11212	56	8.9	–	8.9	–	–	–
Hog and pig farming	1122	9	–	–	33.3	–	–	–
Hog and pig farming	11221	9	–	–	33.3	–	–	–
Poultry and egg production	1123	7	–	–	–	–	–	–
Animal aquaculture	1125	5	–	–	–	–	–	–
Animal aquaculture	11251	5	–	–	–	–	–	–
Finfish farming and fish hatcheries	112511	4	–	–	–	–	–	–
Other animal production	1129	16	–	–	–	–	–	–
Apiculture	11291	4	–	–	–	–	–	–
Horses and other equine production	11292	9	–	–	–	–	–	–
Forestry and logging	113	120	2.5	–	–	–	–	–
Logging	1133	118	2.5	–	–	–	–	–
Logging	11331	118	2.5	–	–	–	–	–
Fishing, hunting and trapping	114	49	–	–	16.3	–	–	–
Fishing	1141	47	–	–	17.0	–	–	–
Fishing	11411	47	–	–	17.0	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Finfish fishing	114111	8	–	–	–	–	–	–
Shellfish fishing	114112	22	–	–	18.2	–	–	–
Agriculture and forestry support activities	115	44	–	–	6.8	–	–	–
Support activities for crop production	1151	24	–	–	12.5	–	–	–
Support activities for crop production	11511	24	–	–	12.5	–	–	–
Soil preparation, planting, and cultivating	115112	6	–	–	–	–	–	–
Crop harvesting, primarily by machine	115113	4	–	–	–	–	–	–
Other postharvest crop activities	115114	3	–	–	–	–	–	–
Farm labor contractors and crew leaders	115115	6	–	–	–	–	–	–
Support activities for animal production	1152	8	–	–	–	–	–	–
Support activities for animal production	11521	8	–	–	–	–	–	–
Support activities for forestry	1153	11	–	–	–	–	–	–
Support activities for forestry	11531	11	–	–	–	–	–	–
Mining[3]	21	141	7.1	7.1	7.1	5.0	–	17.7
Oil and gas extraction	211	17	–	–	–	–	–	23.5
Oil and gas extraction	2111	17	–	–	–	–	–	23.5
Oil and gas extraction	21111	17	–	–	–	–	–	23.5
Crude petroleum and natural gas extraction	211111	16	–	–	–	–	–	25.0
Mining, except oil and gas	212	55	10.9	10.9	9.1	7.3	–	9.1
Coal mining	2121	27	–	–	11.1	11.1	–	–
Coal mining	21211	27	–	–	11.1	11.1	–	–
Bituminous coal and lignite surface mining	212111	6	–	–	–	–	–	–
Bituminous coal underground mining	212112	19	–	–	15.8	15.8	–	–
Metal ore mining	2122	3	–	–	–	–	–	–
Nonmetallic mineral mining and quarrying	2123	24	12.5	12.5	–	–	–	–
Stone mining and quarrying	21231	10	–	–	–	–	–	–
Dimension stone mining and quarrying	212311	4	–	–	–	–	–	–
Crushed and broken limestone mining	212312	3	–	–	–	–	–	–
Other crushed and broken stone mining	212319	3	–	–	–	–	–	–
Sand, gravel, clay, and refractory mining	21232	13	–	–	–	–	–	–
Construction sand and gravel mining	212321	10	–	–	–	–	–	–
Support activities for mining	213	69	5.8	5.8	5.8	–	–	23.2
Support activities for mining	2131	69	5.8	5.8	5.8	–	–	23.2
Support activities for mining	21311	69	5.8	5.8	5.8	–	–	23.2
Drilling oil and gas wells	213111	26	–	–	–	–	–	19.2
Support activities for oil and gas operations	213112	42	–	–	7.1	–	–	23.8
Construction		1,131	32.2	31.3	15.8	11.7	2.4	2.6
Construction	23	1,131	32.2	31.3	15.8	11.7	2.4	2.6
Construction of buildings	236	227	42.3	41.9	11.0	5.3	3.5	–
Residential building construction	2361	129	38.8	38.8	14.0	7.0	5.4	–
Residential building construction	23611	129	38.8	38.8	14.0	7.0	5.4	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
New single-family general contractors	236115	57	35.1	35.1	14.0	–	–	–
New multifamily general contractors	236116	9	44.4	44.4	–	–	–	–
Residential remodelers	236118	29	41.4	41.4	17.2	13.8	–	–
Nonresidential building construction	2362	80	48.8	47.5	8.8	3.8	–	–
Industrial building construction	23621	19	57.9	52.6	–	–	–	–
Commercial building construction	23622	55	49.1	49.1	9.1	5.5	–	–
Heavy and civil engineering construction	237	247	10.1	8.9	18.6	13.4	2.0	2.4
Utility system construction	2371	131	12.2	11.5	24.4	19.8	3.1	2.3
Water and sewer system construction	23711	66	4.5	4.5	16.7	12.1	–	–
Oil and gas pipeline construction	23712	15	–	–	–	–	–	–
Power and communication system construction	23713	49	22.4	22.4	38.8	36.7	–	–
Highway, street, and bridge construction	2373	95	6.3	6.3	12.6	6.3	–	–
Highway, street, and bridge construction	23731	95	6.3	6.3	12.6	6.3	–	–
Other heavy construction	2379	19	–	–	–	–	–	–
Other heavy construction	23799	19	–	–	–	–	–	–
Specialty trade contractors	238	629	37.4	36.6	17.0	13.8	2.2	3.3
Building foundation and exterior contractors	2381	228	54.8	54.4	9.2	7.5	–	2.2
Poured concrete structure contractors	23811	23	–	–	13.0	–	–	–
Residential poured foundation contractors	238111	5	–	–	–	–	–	–
Nonresidential poured foundation contractors	238112	5	–	–	–	–	–	–
Steel and precast concrete contractors	23812	37	59.5	59.5	10.8	10.8	–	–
Nonresidential structural steel contractors	238122	19	68.4	68.4	–	–	–	–
Framing contractors	23813	24	70.8	70.8	–	–	–	–
Residential framing contractors	238131	11	81.8	81.8	–	–	–	–
Masonry contractors	23814	36	36.1	36.1	–	–	–	–
Residential masonry contractors	238141	9	–	–	–	–	–	–
Nonresidential masonry contractors	238142	8	62.5	62.5	–	–	–	–
Glass and glazing contractors	23815	3	–	–	–	–	–	–
Roofing contractors	23816	76	76.3	75.0	7.9	6.6	–	–
Residential roofing contractors	238161	24	75.0	75.0	–	–	–	–
Nonresidential roofing contractors	238162	14	78.6	71.4	–	–	–	–
Siding contractors	23817	13	53.8	53.8	30.8	30.8	–	–
Other building exterior contractors	23819	15	20.0	20.0	–	–	–	33.3
Other residential exterior contractors	238191	3	–	–	–	–	–	–
Other nonresidential exterior contractors	238192	6	–	–	–	–	–	50.0
Building equipment contractors	2382	160	27.5	26.9	31.9	30.0	–	4.4
Electrical contractors	23821	79	29.1	27.8	43.0	41.8	–	3.8
Residential electrical contractors	238211	9	–	–	66.7	66.7	–	–
Nonresidential electrical contractors	238212	32	28.1	25.0	59.4	56.2	–	–
Plumbing and HVAC contractors	23822	69	21.7	21.7	21.7	18.8	–	4.3
Residential plumbing and HVAC contractors	238221	18	22.2	22.2	–	–	–	–
Nonresidential plumbing and HVAC contractors	238222	22	18.2	18.2	27.3	27.3	–	–
Other building equipment contractors	23829	11	54.5	54.5	–	–	–	–
Other nonresidential equipment contractors	238292	6	–	–	–	–	–	–
Building finishing contractors	2383	104	44.2	43.3	22.1	11.5	9.6	4.8
Drywall and insulation contractors	23831	22	68.2	68.2	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Residential drywall contractors	238311	10	70.0	70.0	–	–	–	–
Painting and wall covering contractors	23832	55	47.3	45.5	32.7	18.2	12.7	7.3
Residential painting contractors	238321	17	41.2	41.2	47.1	35.3	–	–
Nonresidential painting contractors	238322	10	50.0	50.0	40.0	–	–	–
Flooring contractors	23833	5	–	–	–	–	–	–
Residential flooring contractors	238331	4	–	–	–	–	–	–
Tile and terrazzo contractors	23834	6	–	–	–	–	–	–
Finish carpentry contractors	23835	10	40.0	40.0	–	–	–	–
Other building finishing contractors	23839	4	–	–	–	–	–	–
Other specialty trade contractors	2389	128	11.7	10.2	8.6	7.0	–	3.1
Site preparation contractors	23891	84	8.3	7.1	8.3	8.3	–	–
Residential site preparation contractors	238911	14	–	–	–	–	–	–
Nonresidential site preparation contractors	238912	32	9.4	9.4	15.6	15.6	–	–
All other specialty trade contractors	23899	44	18.2	15.9	9.1	–	–	–
All other residential trade contractors	238991	13	–	–	–	–	–	–
All other nonresidential trade contractors	238992	9	33.3	33.3	–	–	–	–
Manufacturing		420	9.0	6.9	10.7	5.2	3.6	11.2
Manufacturing	31-33	420	9.0	6.9	10.7	5.2	3.6	11.2
Food manufacturing	311	59	11.9	8.5	15.3	6.8	6.8	10.2
Animal food manufacturing	3111	4	–	–	–	–	–	–
Animal food manufacturing	31111	4	–	–	–	–	–	–
Other animal food manufacturing	311119	3	–	–	–	–	–	–
Grain and oilseed milling	3112	5	–	–	–	–	–	–
Fruit and vegetable preserving and specialty	3114	5	–	–	–	–	–	–
Fruit and vegetable canning and drying	31142	4	–	–	–	–	–	–
Fruit and vegetable canning	311421	4	–	–	–	–	–	–
Dairy product manufacturing	3115	6	–	–	–	–	–	–
Dairy product, except frozen, manufacturing	31151	5	–	–	–	–	–	–
Fluid milk manufacturing	311511	5	–	–	–	–	–	–
Animal slaughtering and processing	3116	19	–	–	21.1	–	–	–
Animal slaughtering and processing	31161	19	–	–	21.1	–	–	–
Meat processed from carcasses	311612	5	–	–	–	–	–	–
Poultry processing	311615	10	–	–	–	–	–	–
Bakeries and tortilla manufacturing	3118	8	–	–	–	–	–	–
Bread and bakery product manufacturing	31181	6	–	–	–	–	–	–
Commercial bakeries	311812	4	–	–	–	–	–	–
Other food manufacturing	3119	8	–	–	–	–	–	–
Seasoning and dressing manufacturing	31194	3	–	–	–	–	–	–
Spice and extract manufacturing	311942	3	–	–	–	–	–	–
All other food manufacturing	31199	3	–	–	–	–	–	–
Beverage and tobacco product manufacturing	312	6	–	–	–	–	–	–
Beverage manufacturing	3121	6	–	–	–	–	–	–
Soft drink and ice manufacturing	31211	6	–	–	–	–	–	–
Soft drink manufacturing	312111	6	–	–	–	–	–	–
Textile mills	313	7	–	–	–	–	–	–
Fabric mills	3132	4	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Broadwoven fabric mills	31321	4	–	–	–	–	–	–
Wood product manufacturing	321	37	8.1	–	–	–	–	–
Sawmills and wood preservation	3211	18	–	–	–	–	–	–
Sawmills and wood preservation	32111	18	–	–	–	–	–	–
Sawmills	321113	16	–	–	–	–	–	–
Plywood and engineered wood product mfg.	3212	7	–	–	–	–	–	–
Plywood and engineered wood product mfg.	32121	7	–	–	–	–	–	–
Truss manufacturing	321214	5	–	–	–	–	–	–
Other wood product manufacturing	3219	12	–	–	–	–	–	–
Millwork	32191	5	–	–	–	–	–	–
Wood container and pallet manufacturing	32192	4	–	–	–	–	–	–
All other wood product manufacturing	32199	3	–	–	–	–	–	–
Paper manufacturing	322	17	–	–	–	–	–	–
Pulp, paper, and paperboard mills	3221	9	–	–	–	–	–	–
Paper mills	32212	8	–	–	–	–	–	–
Paper, except newsprint, mills	322121	3	–	–	–	–	–	–
Newsprint mills	322122	3	–	–	–	–	–	–
Converted paper product manufacturing	3222	8	–	–	–	–	–	–
Paperboard container manufacturing	32221	5	–	–	–	–	–	–
Corrugated and solid fiber box manufacturing	322211	3	–	–	–	–	–	–
Printing and related support activities	323	7	–	–	–	–	–	–
Printing and related support activities	3231	7	–	–	–	–	–	–
Printing	32311	6	–	–	–	–	–	–
Commercial lithographic printing	32311	6	–	–	–	–	–	–
Chemical manufacturing	325	28	–	–	10.7	–	–	35.7
Basic chemical manufacturing	3251	5	–	–	–	–	–	–
Petrochemical manufacturing	32511	3	–	–	–	–	–	–
Resin, rubber, and artificial fibers mfg.	3252	4	–	–	–	–	–	–
Resin and synthetic rubber manufacturing	32521	4	–	–	–	–	–	–
Plastics material and resin manufacturing	325211	4	–	–	–	–	–	–
Soap, cleaning compound, and toiletry mfg.	3256	4	–	–	–	–	–	–
Soap and cleaning compound manufacturing	32561	3	–	–	–	–	–	–
Other chemical product and preparation mfg.	3259	12	–	–	–	–	–	41.7
All other chemical preparation manufacturing	32599	10	–	–	–	–	–	50.0
Other miscellaneous chemical product mfg.	325998	9	–	–	–	–	–	55.6
Plastics and rubber products manufacturing	326	26	–	–	11.5	–	–	34.6
Plastics product manufacturing	3261	18	–	–	16.7	–	–	16.7
Plastics packaging materials, film and sheet	32611	3	–	–	–	–	–	–
Other plastics product manufacturing	32619	8	–	–	–	–	–	–
All other plastics product manufacturing	326199	6	–	–	–	–	–	–
Rubber product manufacturing	3262	8	–	–	–	–	–	75.0
Other rubber product manufacturing	32629	5	–	–	–	–	–	100.0
Rubber product mfg. for mechanical use	326291	5	–	–	–	–	–	100.0
Nonmetallic mineral product manufacturing	327	46	–	–	10.9	8.7	–	15.2

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Clay product and refractory manufacturing	3271	3	–	–	–	–	–	–
Glass and glass product manufacturing	3272	3	–	–	–	–	–	–
Glass and glass product manufacturing	32721	3	–	–	–	–	–	–
Cement and concrete product manufacturing	3273	29	–	–	–	–	–	–
Ready-mix concrete manufacturing	32732	20	–	–	–	–	–	–
Concrete pipe, brick, and block manufacturing	32733	4	–	–	–	–	–	–
Other concrete product manufacturing	32739	4	–	–	–	–	–	–
Other nonmetallic mineral products	3279	11	–	–	–	–	–	63.6
All other nonmetallic mineral products mfg.	32799	11	–	–	–	–	–	63.6
Mineral wool manufacturing	327993	8	–	–	–	–	–	87.5
Primary metal manufacturing	331	33	–	–	9.1	9.1	–	–
Iron and steel mills and ferroalloy mfg.	3311	9	–	–	–	–	–	–
Iron and steel mills and ferroalloy mfg.	33111	9	–	–	–	–	–	–
Iron and steel mills	331111	8	–	–	–	–	–	–
Steel product mfg. from purchased steel	3312	6	–	–	–	–	–	–
Alumina and aluminum production	3313	4	–	–	–	–	–	–
Alumina and aluminum production	33131	4	–	–	–	–	–	–
Foundries	3315	12	–	–	–	–	–	–
Ferrous metal foundries	33151	10	–	–	–	–	–	–
Iron foundries	331511	3	–	–	–	–	–	–
Steel foundries, except investment	331513	7	–	–	–	–	–	–
Fabricated metal product manufacturing	332	43	11.6	11.6	18.6	–	9.3	7.0
Forging and stamping	3321	5	–	–	–	–	–	–
Forging and stamping	33211	5	–	–	–	–	–	–
Metal stamping	332116	3	–	–	–	–	–	–
Architectural and structural metals mfg.	3323	17	23.5	23.5	17.6	–	–	–
Plate work and fabricated structural products	33231	11	–	–	27.3	–	–	–
Fabricated structural metal manufacturing	332312	6	–	–	–	–	–	–
Plate work manufacturing	332313	4	–	–	–	–	–	–
Ornamental and architectural metal products	33232	5	60.0	60.0	–	–	–	–
Machine shops and threaded product mfg.	3327	6	–	–	–	–	–	–
Machine shops	33271	6	–	–	–	–	–	–
Coating, engraving, and heat treating metals	3328	4	–	–	75.0	–	75.0	–
Coating, engraving, and heat treating metals	33281	4	–	–	75.0	–	75.0	–
Machinery manufacturing	333	26	–	–	–	–	–	–
Ag., construction, and mining machinery mfg.	3331	6	–	–	–	–	–	–
Industrial machinery manufacturing	3332	3	–	–	–	–	–	–
Other industrial machinery manufacturing	33329	3	–	–	–	–	–	–
All other industrial machinery manufacturing	333298	3	–	–	–	–	–	–
HVAC and commercial refrigeration equipment	3334	3	–	–	–	–	–	–
HVAC and commercial refrigeration equipment	33341	3	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
AC, refrigeration, and forced air heating	333415	3	–	–	–	–	–	–
Other general purpose machinery manufacturing	3339	11	–	–	–	–	–	–
Material handling equipment manufacturing	33392	8	–	–	–	–	–	–
Conveyor and conveying equipment mfg.	333922	4	–	–	–	–	–	–
Computer and electronic product manufacturing	334	11	–	–	–	–	–	–
Semiconductor and electronic component mfg.	3344	3	–	–	–	–	–	–
Semiconductor and electronic component mfg.	33441	3	–	–	–	–	–	–
Electronic instrument manufacturing	3345	5	–	–	–	–	–	–
Electromedical apparatus manufacturing	33451	5	–	–	–	–	–	–
Electrical equipment and appliance mfg.	335	5	–	–	–	–	–	–
Transportation equipment manufacturing	336	44	13.6	9.1	–	–	–	13.6
Motor vehicle manufacturing	3361	4	–	–	–	–	–	–
Automobile and light truck manufacturing	33611	4	–	–	–	–	–	–
Automobile manufacturing	336111	3	–	–	–	–	–	–
Motor vehicle body and trailer manufacturing	3362	5	–	–	–	–	–	–
Motor vehicle body and trailer manufacturing	33621	5	–	–	–	–	–	–
Motor vehicle body manufacturing	336211	4	–	–	–	–	–	–
Motor vehicle parts manufacturing	3363	14	–	–	–	–	–	–
Other motor vehicle parts manufacturing	33639	8	–	–	–	–	–	–
All other motor vehicle parts manufacturing	336399	8	–	–	–	–	–	–
Aerospace product and parts manufacturing	3364	13	–	–	–	–	–	–
Aerospace product and parts manufacturing	33641	13	–	–	–	–	–	–
Aircraft manufacturing	336411	4	–	–	–	–	–	–
Other aircraft parts and equipment	336413	8	–	–	–	–	–	–
Ship and boat building	3366	6	–	–	–	–	–	–
Ship and boat building	33661	6	–	–	–	–	–	–
Ship building and repairing	336611	5	–	–	–	–	–	–
Furniture and related product manufacturing	337	9	–	–	–	–	–	–
Household and institutional furniture mfg.	3371	8	–	–	–	–	–	–
Other household and institutional furniture	33712	6	–	–	–	–	–	–
Miscellaneous manufacturing	339	7	–	–	–	–	–	–
Other miscellaneous manufacturing	3399	5	–	–	–	–	–	–
Service providing		2,642	8.2	6.2	6.3	2.3	2.1	2.6
Trade, transportation, and utilities		1,375	4.7	3.3	3.6	1.2	1.2	1.7
Wholesale trade	42	191	7.9	6.3	5.8	1.6	–	4.7
Merchant wholesalers, durable goods	423	102	3.9	2.9	6.9	–	–	4.9
Motor vehicle and parts merchant wholesalers	4231	16	–	–	–	–	–	18.8

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
New motor vehicle parts merchant wholesalers	42312	3	–	–	–	–	–	–
Used motor vehicle parts merchant wholesalers	42314	8	–	–	–	–	–	–
Furniture and furnishing merchant wholesalers	4232	5	–	–	–	–	–	–
Home furnishing merchant wholesalers	42322	4	–	–	–	–	–	–
Lumber and const. supply merchant wholesalers	4233	10	–	–	–	–	–	–
Masonry material merchant wholesalers	42332	7	–	–	–	–	–	–
Commercial equip. merchant wholesalers	4234	11	–	–	–	–	–	–
Office equipment merchant wholesalers	42342	5	–	–	–	–	–	–
Medical equipment merchant wholesalers	42345	4	–	–	–	–	–	–
Metal and mineral merchant wholesalers	4235	3	–	–	–	–	–	–
Metal merchant wholesalers	42351	3	–	–	–	–	–	–
Electric goods merchant wholesalers	4236	6	–	–	–	–	–	–
Elec. equip. and wiring merchant wholesalers	42361	4	–	–	–	–	–	–
Machinery and supply merchant wholesalers	4238	26	–	–	–	–	–	–
Construction equipment merchant wholesalers	42381	5	–	–	–	–	–	–
Farm and garden equip. merchant wholesalers	42382	6	–	–	–	–	–	–
Industrial machinery merchant wholesalers	42383	11	–	–	–	–	–	–
Service estab. equip. merchant wholesalers	42385	3	–	–	–	–	–	–
Misc. durable goods merchant wholesalers	4239	24	–	–	–	–	–	–
Recyclable material merchant wholesalers	42393	21	–	–	–	–	–	–
Merchant wholesalers, nondurable goods	424	81	13.6	11.1	3.7	–	–	4.9
Druggists goods merchant wholesalers	4242	3	–	–	–	–	–	–
Druggists goods merchant wholesalers	42421	3	–	–	–	–	–	–
Grocery and related product wholesalers	4244	25	–	–	–	–	–	–
General line grocery merchant wholesalers	42441	9	–	–	–	–	–	–
Packaged frozen food merchant wholesalers	42442	4	–	–	–	–	–	–
Other grocery product merchant wholesalers	42449	7	–	–	–	–	–	–
Farm product raw material merch. whls.	4245	16	43.8	43.8	–	–	–	–
Grain and field bean merchant wholesalers	42451	15	46.7	46.7	–	–	–	–
Petroleum merchant wholesalers	4247	15	–	–	–	–	–	–
Other petroleum merchant wholesalers	42472	13	–	–	–	–	–	–
Alcoholic beverage merchant wholesalers	4248	5	–	–	–	–	–	–
Beer and ale merchant wholesalers	42481	3	–	–	–	–	–	–
Misc. nondurable goods merchant wholesalers	4249	14	–	–	–	–	–	–
Farm supplies merchant wholesalers	42491	7	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Nursery and florist merchant wholesalers	42493	3	–	–	–	–	–	–
Electronic markets and agents and brokers	425	7	–	–	–	–	–	–
Electronic markets and agents and brokers	4251	7	–	–	–	–	–	–
Wholesale trade agents and brokers	42512	6	–	–	–	–	–	–
Retail trade	44-45	344	7.0	4.1	3.5	0.9	2.3	0.9
Motor vehicle and parts dealers	441	67	7.5	–	–	–	–	–
Automobile dealers	4411	26	–	–	–	–	–	–
New car dealers	44111	12	–	–	–	–	–	–
Used car dealers	44112	5	–	–	–	–	–	–
Other motor vehicle dealers	4412	14	–	–	–	–	–	–
Motorcycle, boat, and other vehicle dealers	44122	12	–	–	–	–	–	–
Motorcycle dealers	441221	6	–	–	–	–	–	–
Boat dealers	441222	5	–	–	–	–	–	–
Auto parts, accessories, and tire stores	4413	27	11.1	–	–	–	–	–
Automotive parts and accessories stores	44131	18	–	–	–	–	–	–
Tire dealers	44132	9	–	–	–	–	–	–
Furniture and home furnishings stores	442	8	–	–	–	–	–	–
Furniture stores	4421	4	–	–	–	–	–	–
Furniture stores	44211	4	–	–	–	–	–	–
Home furnishings stores	4422	4	–	–	–	–	–	–
Floor covering stores	44221	3	–	–	–	–	–	–
Electronics and appliance stores	443	5	–	–	–	–	–	–
Electronics and appliance stores	4431	5	–	–	–	–	–	–
Building material and garden supply stores	444	34	14.7	11.8	–	–	–	–
Building material and supplies dealers	4441	23	21.7	17.4	–	–	–	–
Home centers	44411	4	–	–	–	–	–	–
Hardware stores	44413	4	–	–	–	–	–	–
Other building material dealers	44419	14	–	–	–	–	–	–
Lawn and garden equipment and supplies stores	4442	11	–	–	–	–	–	–
Nursery, garden, and farm supply stores	44422	9	–	–	–	–	–	–
Food and beverage stores	445	99	6.1	–	–	–	–	–
Grocery stores	4451	80	7.5	–	–	–	–	–
Supermarkets and other grocery stores	44511	33	18.2	–	–	–	–	–
Convenience stores	44512	40	–	–	–	–	–	–
Specialty food stores	4452	10	–	–	–	–	–	–
Fruit and vegetable markets	44523	3	–	–	–	–	–	–
Beer, wine, and liquor stores	4453	8	–	–	–	–	–	–
Beer, wine, and liquor stores	44531	8	–	–	–	–	–	–
Health and personal care stores	446	7	–	–	–	–	–	–
Health and personal care stores	4461	7	–	–	–	–	–	–
Pharmacies and drug stores	44611	3	–	–	–	–	–	–
Gasoline stations	447	42	–	–	–	–	–	–
Gasoline stations	4471	42	–	–	–	–	–	–
Gasoline stations with convenience stores	44711	35	–	–	–	–	–	–
Other gasoline stations	44719	5	–	–	–	–	–	–
Clothing and clothing accessories stores	448	16	–	–	–	–	–	–
Clothing stores	4481	8	–	–	–	–	–	–
Other clothing stores	44819	3	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Jewelry, luggage, and leather goods stores	4483	8	–	–	–	–	–	–
Jewelry stores	44831	8	–	–	–	–	–	–
Sporting goods, hobby, book and music stores	451	5	–	–	–	–	–	–
Sporting goods and musical instrument stores	4511	3	–	–	–	–	–	–
General merchandise stores	452	11	–	–	–	–	–	–
Department stores	4521	7	–	–	–	–	–	–
Department stores	45211	7	–	–	–	–	–	–
Other general merchandise stores	4529	4	–	–	–	–	–	–
All other general merchandise stores	45299	3	–	–	–	–	–	–
Miscellaneous store retailers	453	25	12.0	12.0	–	–	–	–
Florists	4531	5	–	–	–	–	–	–
Florists	45311	5	–	–	–	–	–	–
Office supplies, stationery, and gift stores	4532	3	–	–	–	–	–	–
Gift, novelty, and souvenir stores	45322	3	–	–	–	–	–	–
Used merchandise stores	4533	7	–	–	–	–	–	–
Used merchandise stores	45331	7	–	–	–	–	–	–
Other miscellaneous store retailers	4539	10	–	–	–	–	–	–
All other miscellaneous store retailers	45399	8	–	–	–	–	–	–
Tobacco stores	453991	3	–	–	–	–	–	–
Store retailers not specified elsewhere	453998	5	–	–	–	–	–	–
Nonstore retailers	454	22	–	–	–	–	–	–
Direct selling establishments	4543	20	–	–	–	–	–	–
Fuel dealers	45431	11	–	–	–	–	–	–
Heating oil dealers	454311	5	–	–	–	–	–	–
Liquefied petroleum gas, bottled gas, dealers	454312	4	–	–	–	–	–	–
Other direct selling establishments	45439	8	–	–	–	–	–	–
Transportation and warehousing	48-49	808	3.0	2.2	2.2	–	0.9	1.0
Air transportation	481	52	–	–	–	–	–	–
Scheduled air transportation	4811	12	–	–	–	–	–	–
Scheduled air transportation	48111	12	–	–	–	–	–	–
Scheduled passenger air transportation	481111	7	–	–	–	–	–	–
Nonscheduled air transportation	4812	40	–	–	–	–	–	–
Nonscheduled air transportation	48121	40	–	–	–	–	–	–
Nonscheduled air passenger chartering	481211	23	–	–	–	–	–	–
Nonscheduled air freight chartering	481212	7	–	–	–	–	–	–
Other nonscheduled air transportation	481219	7	–	–	–	–	–	–
Rail transportation	482	18	–	–	–	–	–	–
Rail transportation	4821	18	–	–	–	–	–	–
Rail transportation	48211	18	–	–	–	–	–	–
Line-haul railroads	482111	9	–	–	–	–	–	–
Water transportation	483	24	–	–	–	–	–	–
Sea, coastal, and Great Lakes transportation	4831	18	–	–	–	–	–	–
Sea, coastal, and Great Lakes transportation	48311	18	–	–	–	–	–	–
Deep sea freight transportation	483111	10	–	–	–	–	–	–
Deep sea passenger transportation	483112	8	–	–	–	–	–	–
Inland water transportation	4832	6	–	–	–	–	–	–
Inland water transportation	48321	6	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Inland water freight transportation	483211	5	–	–	–	–	–	–
Truck transportation	484	517	3.3	2.7	1.4	–	1.0	0.8
General freight trucking	4841	363	4.1	3.3	1.4	–	1.4	.8
General freight trucking, local	48411	42	–	–	–	–	–	–
General freight trucking, long-distance	48412	293	4.1	3.4	1.4	–	1.4	–
General freight trucking, long-distance TL	484121	212	4.7	3.8	1.9	–	1.9	–
General freight trucking, long-distance LTL	484122	36	–	–	–	–	–	–
Specialized freight trucking	4842	128	–	–	–	–	–	–
Used household and office goods moving	48421	11	–	–	–	–	–	–
Other specialized trucking, local	48422	66	–	–	–	–	–	–
Other specialized trucking, long-distance	48423	48	–	–	–	–	–	–
Transit and ground passenger transportation	485	74	–	–	–	–	–	–
Urban transit systems	4851	3	–	–	–	–	–	–
Urban transit systems	48511	3	–	–	–	–	–	–
Taxi and limousine service	4853	59	–	–	–	–	–	–
Taxi service	48531	55	–	–	–	–	–	–
Limousine service	48532	3	–	–	–	–	–	–
Charter bus industry	4855	5	–	–	–	–	–	–
Charter bus industry	48551	5	–	–	–	–	–	–
Other ground passenger transportation	4859	6	–	–	–	–	–	–
Other ground passenger transportation	48599	6	–	–	–	–	–	–
Special needs transportation	485991	5	–	–	–	–	–	–
Scenic and sightseeing transportation	487	9	–	–	–	–	–	–
Scenic and sightseeing transportation, other	4879	5	–	–	–	–	–	–
Scenic and sightseeing transportation, other	48799	5	–	–	–	–	–	–
Support activities for transportation	488	66	–	–	9.1	–	–	–
Support activities for air transportation	4881	7	–	–	–	–	–	–
Other support activities for air transport.	48819	7	–	–	–	–	–	–
Support activities for water transportation	4883	17	–	–	17.6	–	–	–
Marine cargo handling	48832	7	–	–	–	–	–	–
Navigational services to shipping	48833	6	–	–	–	–	–	–
Other support activities for water transport.	48839	3	–	–	–	–	–	–
Support activities for road transportation	4884	39	–	–	–	–	–	–
Motor vehicle towing	48841	28	–	–	–	–	–	–
Other support activities for road transport.	48849	11	–	–	–	–	–	–
Couriers and messengers	492	22	–	–	–	–	–	–
Couriers	4921	17	–	–	–	–	–	–
Couriers	49211	17	–	–	–	–	–	–
Local messengers and local delivery	4922	5	–	–	–	–	–	–
Local messengers and local delivery	49221	5	–	–	–	–	–	–
Warehousing and storage	493	23	17.4	13.0	–	–	–	–
Warehousing and storage	4931	23	17.4	13.0	–	–	–	–
General warehousing and storage	49311	18	–	–	–	–	–	–
Utilities	22	32	–	–	28.1	28.1	–	9.4
Utilities	221	32	–	–	28.1	28.1	–	9.4
Power generation and supply	2211	22	–	–	36.4	36.4	–	–
Electric power generation	22111	8	–	–	37.5	37.5	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Fossil fuel electric power generation	221112	5	–	–	–	–	–	–
Electric power transmission and distribution	22112	14	–	–	35.7	35.7	–	–
Electric power distribution	221122	10	–	–	–	–	–	–
Natural gas distribution	2212	3	–	–	–	–	–	–
Natural gas distribution	22121	3	–	–	–	–	–	–
Water, sewage and other systems	2213	6	–	–	–	–	–	–
Information		64	10.9	7.8	10.9	4.7	–	–
Information	51	64	10.9	7.8	10.9	4.7	–	–
Publishing industries, except Internet	511	31	–	–	9.7	–	–	–
Newspaper, book, and directory publishers	5111	29	–	–	–	–	–	–
Newspaper publishers	51111	27	–	–	–	–	–	–
Motion picture and sound recording industries	512	5	–	–	–	–	–	–
Motion picture and video industries	5121	3	–	–	–	–	–	–
Broadcasting, except Internet	515	3	–	–	–	–	–	–
Radio and television broadcasting	5151	3	–	–	–	–	–	–
Telecommunications	517	21	14.3	–	14.3	14.3	–	–
Wired telecommunications carriers	5171	13	–	–	–	–	–	–
Wired telecommunications carriers	51711	13	–	–	–	–	–	–
Cable and other program distribution	5175	4	–	–	–	–	–	–
Cable and other program distribution	51751	4	–	–	–	–	–	–
ISPs, search portals, and data processing	518	3	–	–	–	–	–	–
Data processing and related services	5182	3	–	–	–	–	–	–
Data processing and related services	51821	3	–	–	–	–	–	–
Financial activities		129	10.9	8.5	6.2	3.9	2.3	2.3
Finance and insurance	52	45	6.7	–	–	–	–	–
Credit intermediation and related activities	522	27	–	–	–	–	–	–
Depository credit intermediation	5221	11	–	–	–	–	–	–
Commercial banking	52211	9	–	–	–	–	–	–
Nondepository credit intermediation	5222	13	–	–	–	–	–	–
Other nondepository credit intermediation	52229	12	–	–	–	–	–	–
Real estate credit	522292	6	–	–	–	–	–	–
All other nondepository credit intermediation	522298	6	–	–	–	–	–	–
Activities related to credit intermediation	5223	3	–	–	–	–	–	–
Other credit intermediation activities	52239	3	–	–	–	–	–	–
Securities, commodity contracts, investments	523	6	–	–	–	–	–	–
Other financial investment activities	5239	4	–	–	–	–	–	–
Investment advice	52393	3	–	–	–	–	–	–
Insurance carriers and related activities	524	11	–	–	–	–	–	–
Insurance carriers	5241	5	–	–	–	–	–	–
Insurance agencies, brokerages, and related	5242	5	–	–	–	–	–	–
Insurance agencies and brokerages	52421	4	–	–	–	–	–	–
Real estate and rental and leasing	53	84	13.1	10.7	8.3	6.0	–	–
Real estate	531	52	19.2	15.4	9.6	7.7	–	–
Lessors of real estate	5311	21	14.3	–	19.0	14.3	–	–
Lessors of residential buildings	53111	17	–	–	17.6	17.6	–	–
Lessors of nonresidential buildings	53112	3	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Offices of real estate agents and brokers	5312	13	–	–	–	–	–	–
Offices of real estate agents and brokers	53121	13	–	–	–	–	–	–
Activities related to real estate	5313	17	35.3	29.4	–	–	–	–
Real estate property managers	53131	17	35.3	29.4	–	–	–	–
Residential property managers	531311	10	50.0	40.0	–	–	–	–
Nonresidential property managers	531312	4	–	–	–	–	–	–
Rental and leasing services	532	31	–	–	–	–	–	–
Automotive equipment rental and leasing	5321	6	–	–	–	–	–	–
Truck, trailer, and RV rental and leasing	53212	4	–	–	–	–	–	–
Consumer goods rental	5322	6	–	–	–	–	–	–
Video tape and disc rental	53223	3	–	–	–	–	–	–
General rental centers	5323	4	–	–	–	–	–	–
General rental centers	53231	4	–	–	–	–	–	–
Machinery and equipment rental and leasing	5324	12	–	–	–	–	–	–
Heavy machinery rental and leasing	53241	8	–	–	–	–	–	–
Other heavy machinery rental and leasing	532412	8	–	–	–	–	–	–
Other machinery rental and leasing	53249	4	–	–	–	–	–	–
Professional and business services		453	15.2	14.1	11.7	5.1	2.9	3.3
Professional and technical services	54	97	8.2	6.2	6.2	4.1	–	–
Professional and technical services	541	97	8.2	6.2	6.2	4.1	–	–
Legal services	5411	14	–	–	–	–	–	–
Offices of lawyers	54111	9	–	–	–	–	–	–
Other legal services	54119	5	–	–	–	–	–	–
All other legal services	541199	4	–	–	–	–	–	–
Accounting and bookkeeping services	5412	8	–	–	–	–	–	–
Accounting and bookkeeping services	54121	8	–	–	–	–	–	–
Offices of certified public accountants	541211	5	–	–	–	–	–	–
Architectural and engineering services	5413	26	–	–	11.5	–	–	–
Architectural services	54131	6	–	–	–	–	–	–
Engineering services	54133	10	–	–	–	–	–	–
Specialized design services	5414	5	–	–	–	–	–	–
Computer systems design and related services	5415	10	–	–	–	–	–	–
Computer systems design and related services	54151	10	–	–	–	–	–	–
Custom computer programming services	541511	4	–	–	–	–	–	–
Management and technical consulting services	5416	12	–	–	–	–	–	–
Management consulting services	54161	10	–	–	–	–	–	–
Scientific research and development services	5417	8	–	–	–	–	–	–
Physical, engineering and biological research	54171	8	–	–	–	–	–	–
Advertising and related services	5418	5	60.0	–	–	–	–	–
Display advertising	54185	3	–	–	–	–	–	–
Other professional and technical services	5419	9	–	–	–	–	–	–
Veterinary services	54194	5	–	–	–	–	–	–
Administrative and waste services	56	356	17.1	16.3	13.2	5.3	3.7	3.7
Administrative and support services	561	265	21.5	20.8	14.3	6.8	3.0	2.6

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Facilities support services	5612	4	–	–	–	–	–	–
Facilities support services	56121	4	–	–	–	–	–	–
Employment services	5613	19	26.3	26.3	–	–	–	–
Temporary help services	56132	13	23.1	23.1	–	–	–	–
Professional employer organizations	56133	6	–	–	–	–	–	–
Business support services	5614	7	–	–	–	–	–	–
Business service centers	56143	3	–	–	–	–	–	–
Private mail centers	561431	3	–	–	–	–	–	–
Other business support services	56149	4	–	–	–	–	–	–
Repossession services	561491	3	–	–	–	–	–	–
Investigation and security services	5616	35	8.6	–	11.4	–	8.6	–
Security and armored car services	56161	35	8.6	–	11.4	–	8.6	–
Security guards and patrol services	561612	31	–	–	12.9	–	9.7	–
Armored car services	561613	3	–	–	–	–	–	–
Services to buildings and dwellings	5617	189	24.9	24.9	16.4	9.5	2.6	2.1
Janitorial services	56172	20	35.0	35.0	15.0	–	15.0	–
Landscaping services	56173	154	24.7	24.7	14.9	11.0	–	–
Other services to buildings and dwellings	56179	11	–	–	36.4	–	–	–
Other support services	5619	7	–	–	–	–	–	–
All other support services	56199	7	–	–	–	–	–	–
Waste management and remediation services	562	91	4.4	3.3	9.9	–	5.5	6.6
Waste collection	5621	58	–	–	6.9	–	–	–
Waste collection	56211	58	–	–	6.9	–	–	–
Solid waste collection	562111	45	–	–	6.7	–	–	–
Hazardous waste collection	562112	6	–	–	–	–	–	–
Other waste collection	562119	4	–	–	–	–	–	–
Waste treatment and disposal	5622	15	–	–	–	–	–	26.7
Waste treatment and disposal	56221	15	–	–	–	–	–	26.7
Hazardous waste treatment and disposal	562211	3	–	–	–	–	–	–
Solid waste landfill	562212	7	–	–	–	–	–	–
Other nonhazardous waste disposal	562219	4	–	–	–	–	–	–
Remediation and other waste services	5629	17	–	–	23.5	–	–	–
Remediation services	56291	5	–	–	–	–	–	–
Materials recovery facilities	56292	3	–	–	–	–	–	–
All other waste management services	56299	9	–	–	–	–	–	–
Septic tank and related services	562991	5	–	–	–	–	–	–
Miscellaneous waste management services	562998	4	–	–	–	–	–	–
Educational and health services		143	13.3	4.9	8.4	–	4.9	–
Educational services	61	41	9.8	7.3	–	–	–	–
Educational services	611	41	9.8	7.3	–	–	–	–
Elementary and secondary schools	6111	4	–	–	–	–	–	–
Elementary and secondary schools	61111	4	–	–	–	–	–	–
Colleges and universities	6113	3	–	–	–	–	–	–
Colleges and universities	61131	3	–	–	–	–	–	–
Technical and trade schools	6115	27	–	–	–	–	–	–
Technical and trade schools	61151	27	–	–	–	–	–	–
Flight training	611512	27	–	–	–	–	–	–
Other schools and instruction	6116	3	–	–	–	–	–	–
Sports and recreation instruction	61162	3	–	–	–	–	–	–
Health care and social assistance	62	102	14.7	3.9	10.8	–	6.9	–
Ambulatory health care services	621	36	11.1	–	11.1	–	11.1	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Offices of physicians	6211	7	–	–	–	–	–	–
Offices of physicians	62111	7	–	–	–	–	–	–
Offices of physicians, except mental health	621111	3	–	–	–	–	–	–
Offices of dentists	6212	5	–	–	–	–	–	–
Offices of dentists	62121	5	–	–	–	–	–	–
Outpatient care centers	6214	6	–	–	50.0	–	50.0	–
Other outpatient care centers	62149	5	–	–	60.0	–	60.0	–
Home health care services	6216	8	–	–	–	–	–	–
Home health care services	62161	8	–	–	–	–	–	–
Other ambulatory health care services	6219	9	–	–	–	–	–	–
Ambulance services	62191	6	–	–	–	–	–	–
All other ambulatory health care services	62199	3	–	–	–	–	–	–
Hospitals	622	24	20.8	–	–	–	–	–
General medical and surgical hospitals	6221	24	20.8	–	–	–	–	–
General medical and surgical hospitals	62211	24	20.8	–	–	–	–	–
Nursing and residential care facilities	623	20	30.0	–	–	–	–	–
Nursing care facilities	6231	7	42.9	–	–	–	–	–
Nursing care facilities	62311	7	42.9	–	–	–	–	–
Residential mental health facilities	6232	3	–	–	–	–	–	–
Community care facilities for the elderly	6233	7	42.9	–	–	–	–	–
Community care facilities for the elderly	62331	7	42.9	–	–	–	–	–
Continuing care retirement communities	623311	3	–	–	–	–	–	–
Homes for the elderly	623312	4	–	–	–	–	–	–
Social assistance	624	20	–	–	15.0	–	–	–
Individual and family services	6241	7	–	–	–	–	–	–
Other individual and family services	62419	3	–	–	–	–	–	–
Vocational rehabilitation services	6243	5	–	–	60.0	–	–	–
Vocational rehabilitation services	62431	5	–	–	60.0	–	–	–
Child day care services	6244	6	–	–	–	–	–	–
Child day care services	62441	6	–	–	–	–	–	–
Leisure and hospitality		275	8.7	5.8	7.3	1.5	2.5	4.0
Arts, entertainment, and recreation	71	88	11.4	8.0	9.1	3.4	–	5.7
Performing arts and spectator sports	711	42	7.1	7.1	9.5	–	–	–
Performing arts companies	7111	6	–	–	–	–	–	–
Musical groups and artists	71113	5	–	–	–	–	–	–
Spectator sports	7112	25	–	–	–	–	–	–
Spectator sports	71121	25	–	–	–	–	–	–
Racetracks	711212	5	–	–	–	–	–	–
Other spectator sports	711219	19	–	–	–	–	–	–
Independent artists, writers, and performers	7115	8	–	–	–	–	–	–
Independent artists, writers, and performers	71151	8	–	–	–	–	–	–
Museums, historical sites, zoos, and parks	712	6	–	–	–	–	–	–
Museums, historical sites, zoos, and parks	7121	6	–	–	–	–	–	–
Amusements, gambling, and recreation	713	40	17.5	10.0	10.0	–	–	12.5
Amusement parks and arcades	7131	8	–	–	37.5	–	–	–
Amusement and theme parks	71311	8	–	–	37.5	–	–	–
Other amusement and recreation industries	7139	31	19.4	9.7	–	–	–	–
Golf courses and country clubs	71391	9	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Fitness and recreational sports centers	71394	4	–	–	–	–	–	–
All other amusement and recreation industries	71399	13	–	–	–	–	–	–
Accommodation and food services	72	187	7.5	4.8	6.4	–	2.7	3.2
Accommodation	721	40	15.0	12.5	–	–	–	–
Traveler accommodation	7211	28	21.4	17.9	–	–	–	–
Hotels and motels, except casino hotels	72111	24	16.7	16.7	–	–	–	–
Casino hotels	72112	3	–	–	–	–	–	–
RV parks and recreational camps	7212	11	–	–	–	–	–	–
RV parks and recreational camps	72121	11	–	–	–	–	–	–
RV parks and campgrounds	721211	6	–	–	–	–	–	–
Recreational and vacation camps	721214	5	–	–	–	–	–	–
Food services and drinking places	722	146	5.5	2.7	6.8	–	3.4	3.4
Full-service restaurants	7221	39	10.3	–	7.7	–	–	–
Full-service restaurants	72211	39	10.3	–	7.7	–	–	–
Limited-service eating places	7222	61	4.9	–	–	–	–	–
Limited-service eating places	72221	61	4.9	–	–	–	–	–
Limited-service restaurants	722211	51	–	–	–	–	–	–
Snack and nonalcoholic beverage bars	722213	5	–	–	–	–	–	–
Special food services	7223	12	–	–	–	–	–	–
Food service contractors	72231	6	–	–	–	–	–	–
Mobile food services	72233	6	–	–	–	–	–	–
Drinking places, alcoholic beverages	7224	33	–	–	12.1	–	9.1	15.2
Drinking places, alcoholic beverages	72241	33	–	–	12.1	–	9.1	15.2
Other services, except public administration		194	8.8	7.7	7.7	3.6	3.6	8.2
Other services, except public administration	81	194	8.8	7.7	7.7	3.6	3.6	8.2
Repair and maintenance	811	121	7.4	6.6	10.7	5.8	4.1	10.7
Automotive repair and maintenance	8111	87	9.2	8.0	6.9	–	5.7	10.3
Automotive mechanical and electrical repair	81111	57	8.8	7.0	5.3	–	5.3	10.5
General automotive repair	811111	45	8.9	6.7	6.7	–	6.7	13.3
Other automotive mechanical and elec. repair	811118	9	–	–	–	–	–	–
Automotive body, interior, and glass repair	81112	15	–	–	–	–	–	–
Automotive body and interior repair	811121	14	–	–	–	–	–	–
Other automotive repair and maintenance	81119	10	–	–	–	–	–	–
Car washes	811192	3	–	–	–	–	–	–
All other automotive repair and maintenance	811198	6	–	–	–	–	–	–
Electronic equipment repair and maintenance	8112	5	–	–	–	–	–	–
Electronic equipment repair and maintenance	81121	5	–	–	–	–	–	–
Consumer electronics repair and maintenance	811211	3	–	–	–	–	–	–
Commercial machinery repair and maintenance	8113	19	–	–	31.6	26.3	–	15.8
Commercial machinery repair and maintenance	81131	19	–	–	31.6	26.3	–	15.8

See footnotes at end of table.

TABLE A-2. **Fatal occupational injuries by industry and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Industry[1]	NAICS Code	Total fatalities (number)	Event or exposure[2] (percent)					
			Falls		Exposure to harmful substances or environments			Fires and explosions
			Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Household goods repair and maintenance	8114	8	–	–	–	–	–	–
Home and garden equip. and appliance repair	81141	4	–	–	–	–	–	–
Other household goods repair and maintenance	81149	4	–	–	–	–	–	–
Personal and laundry services	812	42	7.1	–	–	–	–	–
Personal care services	8121	10	–	–	–	–	–	–
Hair, nail, and skin care services	81211	8	–	–	–	–	–	–
Barber shops	812111	4	–	–	–	–	–	–
Death care services	8122	8	–	–	–	–	–	–
Funeral homes and funeral services	81221	4	–	–	–	–	–	–
Cemeteries and crematories	81222	4	–	–	–	–	–	–
Drycleaning and laundry services	8123	16	–	–	–	–	–	–
Coin-operated laundries and drycleaners	81231	6	–	–	–	–	–	–
Drycleaning and laundry services	81232	7	–	–	–	–	–	–
Linen and uniform supply	81233	3	–	–	–	–	–	–
Other personal services	8129	8	–	–	–	–	–	–
Pet care, except veterinary, services	81291	4	–	–	–	–	–	–
Membership associations and organizations	813	30	16.7	16.7	–	–	–	10.0
Religious organizations	8131	17	23.5	23.5	–	–	–	–
Religious organizations	81311	17	23.5	23.5	–	–	–	–
Civic and social organizations	8134	7	–	–	–	–	–	–
Civic and social organizations	81341	7	–	–	–	–	–	–
Professional and similar organizations	8139	4	–	–	–	–	–	–
Labor unions and similar labor organizations	81393	3	–	–	–	–	–	–
Government[4]		532	6.4	3.9	7.7	3.0	2.4	3.4
Federal government		98	6.1	–	9.2	4.1	–	–
State government		102	9.8	6.9	6.9	–	–	–
Local government		326	5.5	3.7	7.7	3.1	3.4	4.6

[1] Classified according to the North American Industry Classification System, 2002.
[2] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[3] Includes fatalities at all establishments categorized as Mining (Sector 21) in the North American Industry Classification System, 2002, including establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.
[4] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 9 fatalities for which there was insufficient information to determine a specific industry classification, though a distinction between private and government was made for each.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Total	5,575	42.4	24.3	6.2	6.0	16.2	11.3	16.4	9.5	4.3
Management occupations	635	46.5	15.7	24.3	3.5	18.4	10.1	19.4	11.3	4.7
Top executives	42	50.0	23.8	–	–	21.4	14.3	9.5	7.1	–
Chief executives	20	60.0	25.0	–	–	–	–	–	–	–
Chief executives	20	60.0	25.0	–	–	–	–	–	–	–
General and operations managers	21	42.9	23.8	–	–	28.6	23.8	–	–	–
General and operations managers	21	42.9	23.8	–	–	28.6	23.8	–	–	–
Advertising, marketing, promotions, public relations, and sales managers	14	64.3	64.3	–	–	–	–	–	–	–
Marketing and sales managers	12	66.7	66.7	–	–	–	–	–	–	–
Sales managers	11	72.7	72.7	–	–	–	–	–	–	–
Operations specialties managers	34	47.1	26.5	–	8.8	26.5	17.6	–	–	–
Financial managers	8	37.5	–	–	–	62.5	62.5	–	–	–
Financial managers	8	37.5	–	–	–	62.5	62.5	–	–	–
Human resources managers	3	–	–	–	–	–	–	–	–	–
Industrial production managers	9	44.4	–	–	–	–	–	–	–	–
Industrial production managers	9	44.4	–	–	–	–	–	–	–	–
Transportation, storage, and distribution managers	11	45.5	27.3	–	–	–	–	–	–	–
Transportation, storage, and distribution managers	11	45.5	27.3	–	–	–	–	–	–	–
Other management occupations	545	45.7	13.2	27.9	3.1	17.8	9.4	21.5	12.3	5.3
Agricultural managers	360	52.8	10.0	39.7	2.5	10.3	1.4	26.4	15.0	6.9
Farm, ranch, and other agricultural managers	28	39.3	–	28.6	–	17.9	–	32.1	21.4	–
Farmers and ranchers	332	53.9	10.5	40.7	2.1	9.6	1.2	25.9	14.5	6.9
Construction managers	64	43.8	23.4	9.4	7.8	–	–	18.8	9.4	6.2
Construction managers	64	43.8	23.4	9.4	7.8	–	–	18.8	9.4	6.2
Education administrators	9	55.6	33.3	–	–	–	–	–	–	–
Education administrators, elementary and secondary school	4	–	–	–	–	–	–	–	–	–
Engineering managers	3	–	–	–	–	–	–	–	–	–
Engineering managers	3	–	–	–	–	–	–	–	–	–
Food service managers	39	7.7	–	–	–	82.1	64.1	–	–	–
Food service managers	39	7.7	–	–	–	82.1	64.1	–	–	–
Lodging managers	14	21.4	–	–	–	50.0	35.7	–	–	–
Lodging managers	14	21.4	–	–	–	50.0	35.7	–	–	–
Property, real estate, and community association managers	12	–	–	–	–	58.3	58.3	–	–	–
Property, real estate, and community association managers	12	–	–	–	–	58.3	58.3	–	–	–
Social and community service managers	4	75.0	75.0	–	–	–	–	–	–	–
Social and community service managers	4	75.0	75.0	–	–	–	–	–	–	–
Miscellaneous managers	35	31.4	22.9	–	–	28.6	17.1	17.1	17.1	–
Managers, all other	35	31.4	22.9	–	–	28.6	17.1	17.1	17.1	–
Business and financial operations occupations	32	46.9	31.2	–	–	28.1	12.5	–	–	–
Business operations specialists	11	36.4	–	–	–	–	–	–	–	–
Human resources, training, and labor relations specialists	4	–	–	–	–	–	–	–	–	–
Financial specialists	21	52.4	38.1	–	–	33.3	14.3	–	–	–
Accountants and auditors	10	50.0	30.0	–	–	40.0	–	–	–	–
Accountants and auditors	10	50.0	30.0	–	–	40.0	–	–	–	–
Financial analysts and advisors	4	–	–	–	–	–	–	–	–	–
Personal financial advisors	4	–	–	–	–	–	–	–	–	–
Loan counselors and officers	4	–	–	–	–	–	–	–	–	–
Loan officers	4	–	–	–	–	–	–	–	–	–
Computer and mathematical occupations	8	62.5	50.0	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Computer specialists	7	71.4	57.1	–	–	–	–	–	–	–
Architecture and engineering occupations	54	57.4	27.8	–	9.3	5.6	–	11.1	5.6	–
Architects, surveyors, and cartographers	7	57.1	–	–	42.9	–	–	–	–	–
Architects, except naval	4	–	–	–	–	–	–	–	–	–
Architects, except landscape and naval	4	–	–	–	–	–	–	–	–	–
Surveyors, cartographers, and photogrammetrists	3	100.0	–	–	100.0	–	–	–	–	–
Surveyors	3	100.0	–	–	100.0	–	–	–	–	–
Engineers	28	60.7	32.1	–	–	10.7	–	10.7	–	–
Civil engineers	4	75.0	–	–	–	–	–	–	–	–
Civil engineers	4	75.0	–	–	–	–	–	–	–	–
Electrical and electronics engineers	4	–	–	–	–	–	–	–	–	–
Electrical engineers	3	–	–	–	–	–	–	–	–	–
Industrial engineers, including health and safety	3	–	–	–	–	–	–	–	–	–
Industrial engineers	3	–	–	–	–	–	–	–	–	–
Mechanical engineers	7	71.4	42.9	–	–	–	–	–	–	–
Mechanical engineers	7	71.4	42.9	–	–	–	–	–	–	–
Petroleum engineers	6	–	–	–	–	–	–	–	–	–
Petroleum engineers	6	–	–	–	–	–	–	–	–	–
Drafters, engineering, and mapping technicians	19	52.6	31.6	–	–	–	–	15.8	–	–
Engineering technicians, except drafters	15	46.7	33.3	–	–	–	–	20.0	–	–
Electrical and electronic engineering technicians	5	–	–	–	–	–	–	–	–	–
Engineering technicians, except drafters, all other	5	80.0	60.0	–	–	–	–	–	–	–
Life, physical, and social science occupations	20	45.0	20.0	–	–	–	–	–	–	–
Life scientists	8	50.0	–	–	–	–	–	–	–	–
Biological scientists	5	–	–	–	–	–	–	–	–	–
Physical scientists	4	–	–	–	–	–	–	–	–	–
Life, physical, and social science technicians	7	–	–	–	–	–	–	–	–	–
Chemical technicians	4	–	–	–	–	–	–	–	–	–
Chemical technicians	4	–	–	–	–	–	–	–	–	–
Community and social services occupations	29	65.5	55.2	–	–	24.1	10.3	–	–	–
Counselors, social workers, and other community and social service specialists	16	81.2	62.5	–	–	–	–	–	–	–
Social workers	10	90.0	70.0	–	–	–	–	–	–	–
Mental health and substance abuse social workers	3	100.0	–	–	–	–	–	–	–	–
Social workers, all other	4	75.0	75.0	–	–	–	–	–	–	–
Miscellaneous community and social service specialists	4	75.0	75.0	–	–	–	–	–	–	–
Religious workers	13	46.2	46.2	–	–	46.2	23.1	–	–	–
Clergy	10	30.0	30.0	–	–	60.0	30.0	–	–	–
Clergy	10	30.0	30.0	–	–	60.0	30.0	–	–	–
Legal occupations	15	–	–	–	–	46.7	–	–	–	–
Lawyers, judges, and related workers	11	–	–	–	–	54.5	–	–	–	–
Lawyers	11	–	–	–	–	54.5	–	–	–	–
Lawyers	11	–	–	–	–	54.5	–	–	–	–
Legal support workers	4	–	–	–	–	–	–	–	–	–
Miscellaneous legal support workers	3	–	–	–	–	–	–	–	–	–
Education, training, and library occupations	30	73.3	53.3	–	–	–	–	–	–	–
Postsecondary teachers	10	90.0	40.0	–	–	–	–	–	–	–
Miscellaneous postsecondary teachers	9	88.9	44.4	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Vocational education teachers, postsecondary	5	100.0	–	–	–	–	–	–	–	–
Postsecondary teachers, all other	4	75.0	75.0	–	–	–	–	–	–	–
Primary, secondary, and special education school teachers	10	60.0	50.0	–	–	–	–	–	–	–
Elementary and middle school teachers	3	–	–	–	–	–	–	–	–	–
Elementary school teachers, except special education	3	–	–	–	–	–	–	–	–	–
Secondary school teachers	5	60.0	–	–	–	–	–	–	–	–
Secondary school teachers, except special and vocational education	5	60.0	–	–	–	–	–	–	–	–
Other teachers and instructors	3	–	–	–	–	–	–	–	–	–
Librarians, curators, and archivists	4	–	–	–	–	–	–	–	–	–
Librarians	4	–	–	–	–	–	–	–	–	–
Librarians	4	–	–	–	–	–	–	–	–	–
Other education, training, and library occupations	3	100.0	100.0	–	–	–	–	–	–	–
Arts, design, entertainment, sports, and media occupations	58	43.1	20.7	15.5	–	25.9	–	–	–	–
Art and design workers	10	–	–	–	–	60.0	–	–	–	–
Artists and related workers	4	–	–	–	–	–	–	–	–	–
Designers	6	–	–	–	–	66.7	–	–	–	–
Entertainers and performers, sports and related workers	30	46.7	16.7	30.0	–	16.7	–	–	–	–
Athletes, coaches, umpires, and related workers	20	55.0	–	45.0	–	15.0	–	–	–	–
Athletes and sports competitors	14	64.3	–	64.3	–	–	–	–	–	–
Coaches and scouts	6	–	–	–	–	–	–	–	–	–
Miscellaneous entertainers and performers, sports and related workers	5	–	–	–	–	–	–	–	–	–
Entertainers and performers, sports and related workers, all other	5	–	–	–	–	–	–	–	–	–
Media and communication workers	12	50.0	50.0	–	–	–	–	–	–	–
News analysts, reporters and correspondents	3	–	–	–	–	–	–	–	–	–
Reporters and correspondents	3	–	–	–	–	–	–	–	–	–
Media and communication equipment workers	6	–	–	–	–	–	–	–	–	–
Photographers	4	–	–	–	–	–	–	–	–	–
Photographers	4	–	–	–	–	–	–	–	–	–
Healthcare practitioners and technical occupations	49	46.9	34.7	–	–	32.7	12.2	–	–	–
Health diagnosing and treating practitioners	30	26.7	16.7	–	–	46.7	16.7	–	–	–
Dentists	5	–	–	–	–	60.0	–	–	–	–
Dentists, general	4	–	–	–	–	75.0	–	–	–	–
Physicians and surgeons	13	23.1	–	–	–	53.8	23.1	–	–	–
Surgeons	3	100.0	–	–	–	–	–	–	–	–
Physicians and surgeons, all other	7	–	–	–	–	57.1	42.9	–	–	–
Registered nurses	7	–	–	–	–	–	–	–	–	–
Registered nurses	7	–	–	–	–	–	–	–	–	–
Veterinarians	4	–	–	–	–	–	–	–	–	–
Veterinarians	4	–	–	–	–	–	–	–	–	–
Health technologists and technicians	16	81.2	68.8	–	–	–	–	–	–	–
Emergency medical technicians and paramedics	7	85.7	57.1	–	–	–	–	–	–	–
Emergency medical technicians and paramedics	7	85.7	57.1	–	–	–	–	–	–	–
Licensed practical and licensed vocational nurses	4	75.0	75.0	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Licensed practical and licensed vocational nurses	4	75.0	75.0	–	–	–	–	–	–	–
Other healthcare practitioners and technical occupations	3	–	–	–	–	–	–	–	–	–
Healthcare support occupations	20	30.0	25.0	–	–	30.0	30.0	–	–	–
Nursing, psychiatric, and home health aides	14	21.4	21.4	–	–	28.6	28.6	–	–	–
Nursing, psychiatric, and home health aides	14	21.4	21.4	–	–	28.6	28.6	–	–	–
Home health aides	4	75.0	75.0	–	–	–	–	–	–	–
Nursing aides, orderlies, and attendants	10	–	–	–	–	40.0	40.0	–	–	–
Other healthcare support occupations	5	–	–	–	–	–	–	–	–	–
Miscellaneous healthcare support occupations	4	–	–	–	–	–	–	–	–	–
Protective service occupations	312	51.0	33.7	2.9	12.8	34.9	30.4	1.6	1.3	–
First-line supervisors/managers, protective service workers	24	50.0	37.5	–	–	37.5	29.2	–	–	–
First-line supervisors/managers, law enforcement workers	12	33.3	25.0	–	–	50.0	41.7	–	–	–
First-line supervisors/managers of police and detectives	10	30.0	30.0	–	–	50.0	40.0	–	–	–
First-line supervisors/managers, fire fighting and prevention workers	4	75.0	75.0	–	–	–	–	–	–	–
First-line supervisors/managers of fire fighting and prevention workers	4	75.0	75.0	–	–	–	–	–	–	–
Miscellaneous first-line supervisors/managers, protective service workers	8	62.5	37.5	–	–	37.5	–	–	–	–
First-line supervisors/managers, protective service workers, all other	8	62.5	37.5	–	–	37.5	–	–	–	–
Fire fighting and prevention workers	45	64.4	46.7	–	11.1	–	–	–	–	–
Fire fighters	45	64.4	46.7	–	11.1	–	–	–	–	–
Fire fighters	45	64.4	46.7	–	11.1	–	–	–	–	–
Law enforcement workers	153	54.2	43.1	–	8.5	39.2	33.3	–	–	–
Bailiffs, correctional officers, and jailers	11	54.5	54.5	–	–	36.4	–	–	–	–
Correctional officers and jailers	11	54.5	54.5	–	–	36.4	–	–	–	–
Detectives and criminal investigators	9	–	–	–	–	44.4	–	–	–	–
Detectives and criminal investigators	9	–	–	–	–	44.4	–	–	–	–
Fish and game wardens	3	–	–	–	–	–	–	–	–	–
Fish and game wardens	3	–	–	–	–	–	–	–	–	–
Police officers	129	55.0	43.4	–	9.3	39.5	35.7	–	–	–
Police and sheriff's patrol officers	128	54.7	43.0	–	9.4	39.8	35.9	–	–	–
Other protective service workers	90	38.9	10.0	3.3	23.3	44.4	41.1	–	–	–
Security guards and gaming surveillance officers	71	22.5	12.7	4.2	5.6	56.3	52.1	–	–	–
Security guards	71	22.5	12.7	4.2	5.6	56.3	52.1	–	–	–
Miscellaneous protective service workers	18	100.0	–	–	94.4	–	–	–	–	–
Crossing guards	17	100.0	–	–	100.0	–	–	–	–	–
Food preparation and serving related occupations	72	11.1	8.3	–	–	63.9	58.3	–	–	–
Supervisors, food preparation and serving workers	20	20.0	20.0	–	–	75.0	70.0	–	–	–
First-line supervisors/managers, food preparation and serving workers	20	20.0	20.0	–	–	75.0	70.0	–	–	–
Chefs and head cooks	4	–	–	–	–	100.0	100.0	–	–	–
First-line supervisors/managers of food preparation and serving workers	16	25.0	25.0	–	–	68.8	62.5	–	–	–
Cooks and food preparation workers	18	22.2	–	–	–	55.6	50.0	–	–	–
Cooks	16	–	–	–	–	62.5	56.2	–	–	–
Cooks, fast food	7	–	–	–	–	100.0	100.0	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Cooks, restaurant	5	–	–	–	–	–	–	–	–	–
Food and beverage serving workers	28	–	–	–	–	67.9	60.7	–	–	–
Bartenders	8	–	–	–	–	87.5	75.0	–	–	–
Bartenders	8	–	–	–	–	87.5	75.0	–	–	–
Fast food and counter workers	10	–	–	–	–	60.0	50.0	–	–	–
Combined food preparation and serving workers, including fast food	8	–	–	–	–	50.0	37.5	–	–	–
Waiters and waitresses	10	–	–	–	–	60.0	60.0	–	–	–
Waiters and waitresses	10	–	–	–	–	60.0	60.0	–	–	–
Other food preparation and serving related workers	6	–	–	–	–	–	–	–	–	–
Dishwashers	5	–	–	–	–	–	–	–	–	–
Dishwashers	5	–	–	–	–	–	–	–	–	–
Building and grounds cleaning and maintenance occupations	247	27.1	12.6	9.7	2.8	8.1	4.0	24.3	20.6	1.6
Supervisors, building and grounds cleaning and maintenance workers	41	29.3	12.2	12.2	–	9.8	–	29.3	26.8	–
First-line supervisors/managers, building and grounds cleaning and maintenance workers	41	29.3	12.2	12.2	–	9.8	–	29.3	26.8	–
First-line supervisors/managers of housekeeping and janitorial workers	9	–	–	–	–	44.4	–	–	–	–
First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers	32	34.4	12.5	15.6	–	–	–	34.4	31.2	–
Building cleaning and pest control workers	50	14.0	6.0	–	–	22.0	14.0	6.0	–	–
Building cleaning workers	48	10.4	–	–	–	22.9	14.6	6.2	–	–
Janitors and cleaners, except maids and housekeeping cleaners	43	11.6	–	–	–	18.6	11.6	7.0	–	–
Maids and housekeeping cleaners	5	–	–	–	–	60.0	–	–	–	–
Grounds maintenance workers	156	30.8	14.7	10.9	3.8	3.2	1.9	28.8	25.0	1.9
Grounds maintenance workers	156	30.8	14.7	10.9	3.8	3.2	1.9	28.8	25.0	1.9
Landscaping and groundskeeping workers	80	55.0	26.2	20.0	6.2	6.2	3.8	15.0	10.0	–
Tree trimmers and pruners	67	–	–	–	–	–	–	46.3	44.8	–
Grounds maintenance workers, all other	7	42.9	–	–	–	–	–	–	–	–
Personal care and service occupations	53	24.5	11.3	–	5.7	47.2	20.8	5.7	–	5.7
Animal care and service workers	18	16.7	–	–	–	72.2	–	–	–	–
Animal trainers	8	–	–	–	–	87.5	–	–	–	–
Animal trainers	8	–	–	–	–	87.5	–	–	–	–
Nonfarm animal caretakers	10	30.0	–	–	–	60.0	–	–	–	–
Nonfarm animal caretakers	10	30.0	–	–	–	60.0	–	–	–	–
Entertainment attendants and related workers	10	30.0	–	–	–	–	–	–	–	–
Miscellaneous entertainment attendants and related workers	7	42.9	–	–	–	–	–	–	–	–
Amusement and recreation attendants	6	50.0	–	–	–	–	–	–	–	–
Personal appearance workers	7	–	–	–	–	71.4	71.4	–	–	–
Barbers and cosmetologists	6	–	–	–	–	66.7	66.7	–	–	–
Barbers	4	–	–	–	–	100.0	100.0	–	–	–
Transportation, tourism, and lodging attendants	5	–	–	–	–	–	–	–	–	–
Tour and travel guides	3	–	–	–	–	–	–	–	–	–
Tour guides and escorts	3	–	–	–	–	–	–	–	–	–
Other personal care and service workers	10	30.0	–	–	–	40.0	40.0	–	–	–
Recreation and fitness workers	3	–	–	–	–	–	–	–	–	–
Recreation workers	3	–	–	–	–	–	–	–	–	–
Miscellaneous personal care and service workers	3	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Personal care and service workers, all other	3	–	–	–	–	–	–	–	–	–
Sales and related occupations	348	26.4	21.3	–	2.9	60.6	52.0	3.4	1.7	–
Supervisors, sales workers	161	21.7	15.5	–	3.7	64.0	52.8	4.3	1.9	–
First-line supervisors/managers, sales workers	161	21.7	15.5	–	3.7	64.0	52.8	4.3	1.9	–
First-line supervisors/managers of retail sales workers	124	18.5	13.7	–	2.4	73.4	60.5	–	–	–
First-line supervisors/managers of non-retail sales workers	37	32.4	21.6	–	8.1	32.4	27.0	13.5	–	–
Retail sales workers	106	8.5	7.5	–	–	78.3	72.6	3.8	–	–
Cashiers	50	–	–	–	–	90.0	88.0	–	–	–
Cashiers	50	–	–	–	–	90.0	88.0	–	–	–
Counter and rental clerks and parts salespersons	9	–	–	–	–	66.7	55.6	–	–	–
Counter and rental clerks	6	–	–	–	–	83.3	66.7	–	–	–
Parts salespersons	3	–	–	–	–	–	–	–	–	–
Retail salespersons	47	12.8	12.8	–	–	68.1	59.6	8.5	–	–
Retail salespersons	47	12.8	12.8	–	–	68.1	59.6	8.5	–	–
Sales representatives, services	14	71.4	50.0	–	–	21.4	–	–	–	–
Miscellaneous sales representatives, services	8	100.0	75.0	–	–	–	–	–	–	–
Sales representatives, services, all other	8	100.0	75.0	–	–	–	–	–	–	–
Sales representatives, wholesale and manufacturing	27	74.1	74.1	–	–	11.1	–	–	–	–
Sales representatives, wholesale and manufacturing	27	74.1	74.1	–	–	11.1	–	–	–	–
Sales representatives, wholesale and manufacturing, technical and scientific products	10	70.0	70.0	–	–	–	–	–	–	–
Sales representatives, wholesale and manufacturing, except technical and scientific products	17	76.5	76.5	–	–	–	–	–	–	–
Other sales and related workers	40	45.0	35.0	–	7.5	47.5	40.0	–	–	–
Real estate brokers and sales agents	12	25.0	–	–	–	66.7	50.0	–	–	–
Real estate sales agents	10	30.0	–	–	–	70.0	60.0	–	–	–
Miscellaneous sales and related workers	26	53.8	42.3	–	–	42.3	38.5	–	–	–
Door-to-door sales workers, news and street vendors, and related workers	23	52.2	43.5	–	–	43.5	43.5	–	–	–
Sales and related workers, all other	3	–	–	–	–	–	–	–	–	–
Office and administrative support occupations	112	38.4	30.4	–	4.5	42.0	33.0	3.6	2.7	–
Supervisors, office and administrative support workers	7	–	–	–	–	–	–	–	–	–
First-line supervisors/managers of office and administrative support workers	7	–	–	–	–	–	–	–	–	–
First-line supervisors/managers of office and administrative support workers	7	–	–	–	–	–	–	–	–	–
Financial clerks	11	–	–	–	–	72.7	45.5	–	–	–
Bill and account collectors	3	–	–	–	–	–	–	–	–	–
Bill and account collectors	3	–	–	–	–	–	–	–	–	–
Bookkeeping, accounting, and auditing clerks	3	–	–	–	–	100.0	–	–	–	–
Bookkeeping, accounting, and auditing clerks	3	–	–	–	–	100.0	–	–	–	–
Tellers	3	–	–	–	–	–	–	–	–	–
Tellers	3	–	–	–	–	–	–	–	–	–
Information and record clerks	11	–	–	–	–	63.6	54.5	–	–	–
Customer service representatives	4	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Customer service representatives	4	–	–	–	–	–	–	–	–	–
Material recording, scheduling, dispatching, and distributing workers	56	58.9	44.6	–	7.1	28.6	25.0	5.4	5.4	–
Couriers and messengers	12	91.7	83.3	–	–	–	–	–	–	–
Couriers and messengers	12	91.7	83.3	–	–	–	–	–	–	–
Dispatchers	4	–	–	–	–	100.0	75.0	–	–	–
Dispatchers, except police, fire, and ambulance	3	–	–	–	–	100.0	–	–	–	–
Postal service workers	12	75.0	58.3	–	–	25.0	–	–	–	–
Postal service mail carriers	11	81.8	63.6	–	–	–	–	–	–	–
Shipping, receiving, and traffic clerks	5	–	–	–	–	–	–	–	–	–
Shipping, receiving, and traffic clerks	5	–	–	–	–	–	–	–	–	–
Stock clerks and order fillers	18	33.3	22.2	–	–	33.3	33.3	–	–	–
Stock clerks and order fillers	18	33.3	22.2	–	–	33.3	33.3	–	–	–
Secretaries and administrative assistants	10	–	–	–	–	60.0	50.0	–	–	–
Secretaries and administrative assistants	10	–	–	–	–	60.0	50.0	–	–	–
Secretaries, except legal, medical, and executive	7	–	–	–	–	57.1	57.1	–	–	–
Other office and administrative support workers	17	23.5	17.6	–	–	47.1	29.4	–	–	–
Office clerks, general	8	–	–	–	–	87.5	50.0	–	–	–
Office clerks, general	8	–	–	–	–	87.5	50.0	–	–	–
Miscellaneous office and administrative support workers	4	–	–	–	–	–	–	–	–	–
Office and administrative support workers, all other	4	–	–	–	–	–	–	–	–	–
Farming, fishing, and forestry occupations	305	41.0	11.1	13.1	3.6	5.6	3.0	37.4	29.5	6.9
Supervisors, farming, fishing, and forestry workers	11	–	–	–	–	–	–	63.6	54.5	–
First-line supervisors/managers of farming, fishing, and forestry workers	11	–	–	–	–	–	–	63.6	54.5	–
First-line supervisors/managers of farming, fishing, and forestry workers	11	–	–	–	–	–	–	63.6	54.5	–
Agricultural workers	136	47.1	18.4	21.3	5.9	10.3	5.9	19.1	6.6	10.3
Miscellaneous agricultural workers	130	46.2	16.9	21.5	6.2	10.8	6.2	20.0	6.9	10.8
Agricultural equipment operators	12	83.3	33.3	41.7	–	–	–	–	–	–
Farmworkers and laborers, crop, nursery, and greenhouse	63	46.0	14.3	20.6	9.5	7.9	7.9	15.9	7.9	6.3
Farmworkers, farm and ranch animals	52	40.4	17.3	19.2	–	15.4	–	26.9	7.7	15.4
Agricultural workers, all other	3	–	–	–	–	–	–	–	–	–
Fishing and hunting workers	50	76.0	–	–	–	–	–	–	–	–
Fishers and related fishing workers	48	75.0	–	–	–	–	–	–	–	–
Fishers and related fishing workers	48	75.0	–	–	–	–	–	–	–	–
Forest, conservation, and logging workers	108	19.4	6.5	9.3	–	–	–	73.1	69.4	3.7
Forest and conservation workers	3	–	–	–	–	–	–	–	–	–
Forest and conservation workers	3	–	–	–	–	–	–	–	–	–
Logging workers	105	19.0	6.7	9.5	–	–	–	75.2	71.4	3.8
Fallers	57	–	–	–	–	–	–	91.2	86.0	5.3
Logging equipment operators	25	52.0	24.0	28.0	–	–	–	32.0	32.0	–
Logging workers, all other	22	13.6	–	–	–	–	–	86.4	81.8	–
Construction and extraction occupations	1,038	24.6	11.6	4.4	7.4	3.4	1.6	22.5	10.9	4.3
Supervisors, construction and extraction workers	112	28.6	11.6	7.1	7.1	8.0	2.7	23.2	11.6	4.5
First-line supervisors/managers of construction trades and extraction workers	112	28.6	11.6	7.1	7.1	8.0	2.7	23.2	11.6	4.5
First-line supervisors/managers of construction trades and extraction workers	112	28.6	11.6	7.1	7.1	8.0	2.7	23.2	11.6	4.5
Construction trades workers	788	23.2	11.2	4.1	7.1	3.2	1.8	21.4	9.8	3.8

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Boilermakers	4	–	–	–	–	–	–	–	–	–
Boilermakers	4	–	–	–	–	–	–	–	–	–
Brickmasons, blockmasons, and stonemasons	13	23.1	–	–	–	–	–	23.1	–	–
Brickmasons and blockmasons	11	27.3	–	–	–	–	–	–	–	–
Carpenters	96	10.4	6.2	3.1	–	3.1	3.1	18.8	7.3	–
Carpenters	96	10.4	6.2	3.1	–	3.1	3.1	18.8	7.3	–
Carpet, floor, and tile installers and finishers	3	–	–	–	–	–	–	–	–	–
Cement masons, concrete finishers, and terrazzo workers	12	33.3	–	–	–	–	–	33.3	–	–
Cement masons and concrete finishers	12	33.3	–	–	–	–	–	33.3	–	–
Construction laborers	290	29.3	12.4	3.8	12.4	2.1	1.7	32.8	15.5	3.4
Construction laborers	290	29.3	12.4	3.8	12.4	2.1	1.7	32.8	15.5	3.4
Construction equipment operators	63	60.3	14.3	27.0	12.7	–	–	23.8	9.5	11.1
Paving, surfacing, and tamping equipment operators	5	80.0	–	–	–	–	–	–	–	–
Operating engineers and other construction equipment operators	57	59.6	14.0	28.1	10.5	–	–	26.3	10.5	12.3
Drywall installers, ceiling tile installers, and tapers	13	–	–	–	–	–	–	–	–	–
Drywall and ceiling tile installers	13	–	–	–	–	–	–	–	–	–
Electricians	87	11.5	10.3	–	–	4.6	–	9.2	4.6	3.4
Electricians	87	11.5	10.3	–	–	4.6	–	9.2	4.6	3.4
Glaziers	4	–	–	–	–	–	–	–	–	–
Glaziers	4	–	–	–	–	–	–	–	–	–
Insulation workers	3	–	–	–	–	–	–	–	–	–
Insulation workers, floor, ceiling, and wall	3	–	–	–	–	–	–	–	–	–
Painters and paperhangers	57	7.0	5.3	–	–	–	–	5.3	–	–
Painters, construction and maintenance	56	7.1	5.4	–	–	–	–	5.4	–	–
Pipelayers, plumbers, pipefitters, and steamfitters	38	26.3	18.4	–	7.9	–	–	34.2	15.8	–
Pipelayers	6	–	–	–	–	–	–	66.7	–	–
Plumbers, pipefitters, and steamfitters	32	25.0	21.9	–	–	–	–	28.1	12.5	–
Plasterers and stucco masons	8	–	–	–	–	–	–	–	–	–
Plasterers and stucco masons	8	–	–	–	–	–	–	–	–	–
Roofers	55	7.3	5.5	–	–	–	–	–	–	–
Roofers	55	7.3	5.5	–	–	–	–	–	–	–
Sheet metal workers	5	–	–	–	–	–	–	–	–	–
Sheet metal workers	5	–	–	–	–	–	–	–	–	–
Structural iron and steel workers	37	21.6	16.2	–	–	–	–	16.2	10.8	–
Structural iron and steel workers	37	21.6	16.2	–	–	–	–	16.2	10.8	–
Helpers, construction trades	26	19.2	–	–	–	–	–	23.1	11.5	–
Helpers, construction trades	26	19.2	–	–	–	–	–	23.1	11.5	–
Helpers--brickmasons, blockmasons, stonemasons, and tile and marble setters	3	–	–	–	–	–	–	–	–	–
Helpers--electricians	4	–	–	–	–	–	–	–	–	–
Helpers--pipelayers, plumbers, pipefitters, and steamfitters	3	–	–	–	–	–	–	–	–	–
Helpers--roofers	5	–	–	–	–	–	–	–	–	–
Helpers, construction trades, all other	8	37.5	–	–	–	–	–	–	–	–
Other construction and related workers	44	47.7	18.2	–	27.3	–	–	11.4	–	–
Construction and building inspectors	6	–	–	–	–	–	–	–	–	–
Construction and building inspectors	6	–	–	–	–	–	–	–	–	–
Hazardous materials removal workers	4	–	–	–	–	–	–	–	–	–
Hazardous materials removal workers	4	–	–	–	–	–	–	–	–	–
Highway maintenance workers	17	82.4	17.6	–	64.7	–	–	–	–	–
Highway maintenance workers	17	82.4	17.6	–	64.7	–	–	–	–	–
Miscellaneous construction and related workers	11	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Construction and related workers, all other	11	–	–	–	–	–	–	–	–	–
Extraction workers	68	20.6	13.2	4.4	–	–	–	41.2	26.5	10.3
Derrick, rotary drill, and service unit operators, oil, gas, and mining	12	–	–	–	–	–	–	58.3	50.0	–
Derrick operators, oil and gas	4	–	–	–	–	–	–	–	–	–
Rotary drill operators, oil and gas	8	–	–	–	–	–	–	75.0	62.5	–
Earth drillers, except oil and gas	12	–	–	–	–	–	–	25.0	–	–
Earth drillers, except oil and gas	12	–	–	–	–	–	–	25.0	–	–
Mining machine operators	11	–	–	–	–	–	–	45.5	27.3	–
Continuous mining machine operators	3	–	–	–	–	–	–	100.0	–	–
Mining machine operators, all other	8	–	–	–	–	–	–	–	–	–
Roustabouts, oil and gas	8	–	–	–	–	–	–	50.0	37.5	–
Roustabouts, oil and gas	8	–	–	–	–	–	–	50.0	37.5	–
Helpers--extraction workers	4	–	–	–	–	–	–	–	–	–
Helpers--extraction workers	4	–	–	–	–	–	–	–	–	–
Miscellaneous extraction workers	19	36.8	26.3	–	–	–	–	31.6	15.8	–
Extraction workers, all other	19	36.8	26.3	–	–	–	–	31.6	15.8	–
Installation, maintenance, and repair occupations	394	18.0	9.9	1.8	5.3	11.4	6.9	24.9	14.0	8.6
Supervisors of installation, maintenance, and repair workers	34	14.7	11.8	–	–	20.6	17.6	23.5	17.6	–
First-line supervisors/managers of mechanics, installers, and repairers	34	14.7	11.8	–	–	20.6	17.6	23.5	17.6	–
First-line supervisors/managers of mechanics, installers, and repairers	34	14.7	11.8	–	–	20.6	17.6	23.5	17.6	–
Electrical and electronic equipment mechanics, installers, and repairers	20	30.0	25.0	–	–	–	–	–	–	–
Computer, automated teller, and office machine repairers	4	75.0	75.0	–	–	–	–	–	–	–
Computer, automated teller, and office machine repairers	4	75.0	75.0	–	–	–	–	–	–	–
Radio and telecommunications equipment installers and repairers	11	–	–	–	–	–	–	–	–	–
Telecommunications equipment installers and repairers, except line installers	10	–	–	–	–	–	–	–	–	–
Miscellaneous electrical and electronic equipment mechanics, installers, and repairers	5	–	–	–	–	–	–	–	–	–
Vehicle and mobile equipment mechanics, installers, and repairers	122	18.0	9.0	–	7.4	22.1	13.9	34.4	22.1	9.8
Aircraft mechanics and service technicians	3	–	–	–	–	–	–	–	–	–
Aircraft mechanics and service technicians	3	–	–	–	–	–	–	–	–	–
Automotive technicians and repairers	69	13.0	5.8	–	5.8	36.2	21.7	30.4	20.3	8.7
Automotive body and related repairers	11	–	–	–	–	45.5	27.3	27.3	27.3	–
Automotive service technicians and mechanics	57	10.5	–	–	5.3	35.1	21.1	31.6	19.3	10.5
Bus and truck mechanics and diesel engine specialists	17	29.4	–	–	17.6	–	–	35.3	17.6	–
Bus and truck mechanics and diesel engine specialists	17	29.4	–	–	17.6	–	–	35.3	17.6	–
Heavy vehicle and mobile equipment service technicians and mechanics	21	14.3	–	–	–	–	–	57.1	33.3	19.0
Farm equipment mechanics	3	–	–	–	–	–	–	100.0	–	–
Mobile heavy equipment mechanics, except engines	17	17.6	–	–	–	–	–	52.9	29.4	17.6
Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	10	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Tire repairers and changers	8	–	–	–	–	–	–	–	–	–
Other installation, maintenance, and repair occupations	218	17.4	8.7	2.8	5.0	4.6	1.4	20.6	9.6	9.6
Heating, air conditioning, and refrigeration mechanics and installers	31	19.4	12.9	–	–	–	–	–	–	–
Heating, air conditioning, and refrigeration mechanics and installers	31	19.4	12.9	–	–	–	–	–	–	–
Industrial machinery installation, repair, and maintenance workers	97	16.5	8.2	6.2	–	7.2	–	33.0	14.4	16.5
Industrial machinery mechanics	26	11.5	–	–	–	–	–	50.0	26.9	19.2
Maintenance and repair workers, general	54	22.2	11.1	11.1	–	11.1	–	18.5	7.4	9.3
Maintenance workers, machinery	10	–	–	–	–	–	–	70.0	–	50.0
Millwrights	7	–	–	–	–	–	–	–	–	–
Line installers and repairers	54	16.7	7.4	–	7.4	–	–	9.3	5.6	–
Electrical power-line installers and repairers	38	13.2	–	–	–	–	–	7.9	–	–
Telecommunications line installers and repairers	16	25.0	–	–	–	–	–	–	–	–
Precision instrument and equipment repairers	4	–	–	–	–	–	–	–	–	–
Miscellaneous installation, maintenance, and repair workers	29	20.7	–	–	13.8	–	–	17.2	–	10.3
Commercial divers	6	–	–	–	–	–	–	–	–	–
Helpers--installation, maintenance, and repair workers	5	–	–	–	–	–	–	–	–	–
Installation, maintenance, and repair workers, all other	16	–	–	–	–	–	–	18.8	–	–
Production occupations	283	13.4	5.7	1.1	4.6	15.2	9.5	34.6	13.4	18.7
Transportation and material moving occupations	1,393	71.9	48.9	3.3	8.3	7.6	6.0	10.3	6.3	3.0
Supervisors, production workers	36	19.4	8.3	–	11.1	27.8	16.7	25.0	13.9	8.3
First-line supervisors/managers of production and operating workers	36	19.4	8.3	–	11.1	27.8	16.7	25.0	13.9	8.3
First-line supervisors/managers of production and operating workers	36	19.4	8.3	–	11.1	27.8	16.7	25.0	13.9	8.3
Assemblers and fabricators	34	14.7	–	–	–	26.5	14.7	32.4	17.6	14.7
Structural metal fabricators and fitters	3	–	–	–	–	–	–	–	–	–
Structural metal fabricators and fitters	3	–	–	–	–	–	–	–	–	–
Miscellaneous assemblers and fabricators	29	17.2	–	–	–	27.6	17.2	31.0	13.8	17.2
Assemblers and fabricators, all other	26	19.2	–	–	–	26.9	19.2	26.9	–	19.2
Food processing workers	14	28.6	–	–	21.4	28.6	28.6	28.6	–	–
Butchers and other meat, poultry, and fish processing workers	9	33.3	–	–	–	–	–	–	–	–
Butchers and meat cutters	6	–	–	–	–	–	–	–	–	–
Meat, poultry, and fish cutters and trimmers	3	–	–	–	–	–	–	–	–	–
Miscellaneous food processing workers	3	–	–	–	–	–	–	–	–	–
Food and tobacco roasting, baking, and drying machine operators and tenders	3	–	–	–	–	–	–	–	–	–
Metal workers and plastic workers	83	6.0	3.6	–	–	8.4	3.6	39.8	20.5	15.7
Forming machine setters, operators, and tenders, metal and plastic	4	–	–	–	–	–	–	75.0	–	–
Machine tool cutting setters, operators, and tenders, metal and plastic	4	–	–	–	–	–	–	100.0	75.0	–
Machinists	5	–	–	–	–	–	–	60.0	–	–
Machinists	5	–	–	–	–	–	–	60.0	–	–
Metal furnace and kiln operators and tenders	3	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Molders and molding machine setters, operators, and tenders, metal and plastic	5	–	–	–	–	–	–	80.0	–	80.0
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	4	–	–	–	–	–	–	75.0	–	75.0
Welding, soldering, and brazing workers	50	8.0	6.0	–	–	8.0	–	24.0	16.0	6.0
Welders, cutters, solderers, and brazers	48	8.3	6.2	–	–	6.2	–	25.0	16.7	6.2
Miscellaneous metalworkers and plastic workers	10	–	–	–	–	–	–	50.0	–	–
Metal workers and plastic workers, all other	7	–	–	–	–	–	–	42.9	–	–
Textile, apparel, and furnishings workers	7	–	–	–	–	42.9	42.9	–	–	–
Laundry and dry-cleaning workers	6	–	–	–	–	50.0	50.0	–	–	–
Laundry and dry-cleaning workers	6	–	–	–	–	50.0	50.0	–	–	–
Woodworkers	7	–	–	–	–	–	–	85.7	57.1	–
Woodworking machine setters, operators, and tenders	4	–	–	–	–	–	–	100.0	–	–
Sawing machine setters, operators, and tenders, wood	3	–	–	–	–	–	–	100.0	–	–
Plant and system operators	15	20.0	–	–	–	20.0	–	–	–	–
Stationary engineers and boiler operators	6	–	–	–	–	–	–	–	–	–
Stationary engineers and boiler operators	6	–	–	–	–	–	–	–	–	–
Water and liquid waste treatment plant and system operators	5	–	–	–	–	–	–	–	–	–
Water and liquid waste treatment plant and system operators	5	–	–	–	–	–	–	–	–	–
Miscellaneous plant and system operators	3	–	–	–	–	–	–	–	–	–
Other production occupations	85	16.5	5.9	–	4.7	7.1	5.9	37.6	5.9	29.4
Chemical processing machine setters, operators, and tenders	3	–	–	–	–	–	–	–	–	–
Chemical equipment operators and tenders	3	–	–	–	–	–	–	–	–	–
Crushing, grinding, polishing, mixing, and blending workers	7	–	–	–	–	–	–	–	–	–
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	4	–	–	–	–	–	–	100.0	–	75.0
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	4	–	–	–	–	–	–	100.0	–	75.0
Furnace, kiln, oven, drier, and kettle operators and tenders	5	–	–	–	–	–	–	–	–	–
Furnace, kiln, oven, drier, and kettle operators and tenders	5	–	–	–	–	–	–	–	–	–
Inspectors, testers, sorters, samplers, and weighers	9	33.3	–	–	–	–	–	–	–	–
Inspectors, testers, sorters, samplers, and weighers	9	33.3	–	–	–	–	–	–	–	–
Packaging and filling machine operators and tenders	4	–	–	–	–	–	–	75.0	–	75.0
Packaging and filling machine operators and tenders	4	–	–	–	–	–	–	75.0	–	75.0
Miscellaneous production workers	50	14.0	–	–	8.0	6.0	6.0	42.0	6.0	32.0
Helpers--production workers	8	–	–	–	–	–	–	37.5	–	37.5
Production workers, all other	36	8.3	–	–	–	–	–	41.7	8.3	27.8
Supervisors, transportation and material moving workers	16	37.5	18.8	–	–	18.8	18.8	18.8	18.8	–
First-line supervisors/managers of helpers, laborers, and material movers, hand	10	–	–	–	–	–	–	30.0	30.0	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
First-line supervisors/managers of helpers, laborers, and material movers, hand	10	–	–	–	–	–	–	30.0	30.0	–
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	6	66.7	50.0	–	–	–	–	–	–	–
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	6	66.7	50.0	–	–	–	–	–	–	–
Air transportation workers	114	100.0	–	–	–	–	–	–	–	–
Aircraft pilots and flight engineers	114	100.0	–	–	–	–	–	–	–	–
Airline pilots, copilots, and flight engineers	18	100.0	–	–	–	–	–	–	–	–
Commercial pilots	96	100.0	–	–	–	–	–	–	–	–
Motor vehicle operators	956	79.1	66.5	1.3	8.8	7.9	7.0	7.1	4.7	2.1
Bus drivers	20	80.0	60.0	–	20.0	–	–	–	–	–
Bus drivers, transit and intercity	12	66.7	50.0	–	–	–	–	–	–	–
Bus drivers, school	8	100.0	75.0	–	–	–	–	–	–	–
Driver/sales workers and truck drivers	862	82.6	69.4	1.4	9.2	3.5	2.6	7.8	5.1	2.3
Driver/sales workers	44	77.3	68.2	–	9.1	20.5	20.5	–	–	–
Truck drivers, heavy and tractor-trailer	722	82.5	69.5	1.5	9.3	2.6	1.7	8.0	5.4	2.2
Truck drivers, light or delivery services	96	85.4	68.8	–	8.3	–	–	8.3	4.2	4.2
Taxi drivers and chauffeurs	64	28.1	28.1	–	–	70.3	70.3	–	–	–
Taxi drivers and chauffeurs	64	28.1	28.1	–	–	70.3	70.3	–	–	–
Miscellaneous motor vehicle operators	10	100.0	80.0	–	–	–	–	–	–	–
Motor vehicle operators, all other	10	100.0	80.0	–	–	–	–	–	–	–
Rail transportation workers	16	81.2	–	–	31.2	–	–	–	–	–
Railroad brake, signal, and switch operators	5	100.0	–	–	60.0	–	–	–	–	–
Railroad brake, signal, and switch operators	5	100.0	–	–	60.0	–	–	–	–	–
Railroad conductors and yardmasters	8	75.0	–	–	–	–	–	–	–	–
Railroad conductors and yardmasters	8	75.0	–	–	–	–	–	–	–	–
Water transportation workers	27	40.7	–	–	–	18.5	–	18.5	11.1	–
Sailors and marine oilers	13	46.2	–	–	–	23.1	–	–	–	–
Sailors and marine oilers	13	46.2	–	–	–	23.1	–	–	–	–
Ship and boat captains and operators	10	30.0	–	–	–	–	–	30.0	–	–
Captains, mates, and pilots of water vessels	10	30.0	–	–	–	–	–	30.0	–	–
Ship engineers	4	–	–	–	–	–	–	–	–	–
Ship engineers	4	–	–	–	–	–	–	–	–	–
Other transportation workers	13	38.5	–	–	30.8	38.5	30.8	–	–	–
Parking lot attendants	4	75.0	–	–	75.0	–	–	–	–	–
Parking lot attendants	4	75.0	–	–	75.0	–	–	–	–	–
Service station attendants	5	–	–	–	–	80.0	80.0	–	–	–
Service station attendants	5	–	–	–	–	80.0	80.0	–	–	–
Transportation inspectors	3	–	–	–	–	–	–	–	–	–
Transportation inspectors	3	–	–	–	–	–	–	–	–	–
Material moving workers	251	38.6	15.5	12.7	8.8	6.8	3.6	25.9	14.3	8.0
Crane and tower operators	14	42.9	–	–	21.4	–	–	50.0	–	35.7
Crane and tower operators	14	42.9	–	–	21.4	–	–	50.0	–	35.7
Dredge, excavating, and loading machine operators	15	33.3	–	–	–	–	–	46.7	26.7	–
Excavating and loading machine and dragline operators	14	28.6	–	–	–	–	–	50.0	28.6	–
Hoist and winch operators	3	–	–	–	–	–	–	–	–	–
Hoist and winch operators	3	–	–	–	–	–	–	–	–	–
Industrial truck and tractor operators	42	59.5	–	50.0	–	–	–	19.0	14.3	–
Industrial truck and tractor operators	42	59.5	–	50.0	–	–	–	19.0	14.3	–
Laborers and material movers, hand	117	22.2	8.5	3.4	8.5	12.0	5.1	23.9	14.5	4.3
Cleaners of vehicles and equipment	9	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-3. **Fatal occupational injuries by occupation and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[3]	Highway incidents[4]	Non-highway incidents	Worker struck by vehicle	Total[5]	Homicides	Total	Struck by object	Caught in equipment or object
Laborers and freight, stock, and material movers, hand	106	21.7	7.5	2.8	9.4	11.3	4.7	24.5	16.0	2.8
Pumping station operators	6	50.0	50.0	–	–	–	–	–	–	–
Wellhead pumpers	6	50.0	50.0	–	–	–	–	–	–	–
Refuse and recyclable material collectors	43	69.8	46.5	–	16.3	–	–	20.9	11.6	7.0
Refuse and recyclable material collectors	43	69.8	46.5	–	16.3	–	–	20.9	11.6	7.0
Miscellaneous material moving workers	8	–	–	–	–	–	–	37.5	–	–
Material moving workers, all other	8	–	–	–	–	–	–	37.5	–	–
Military specific occupations	62	62.9	12.9	–	–	14.5	–	11.3	8.1	–
Military enlisted tactical operations and air/weapons specialists and crew members	32	56.2	18.8	–	–	15.6	–	15.6	12.5	–
Military enlisted tactical operations and air/weapons specialists and crew members	32	56.2	18.8	–	–	15.6	–	15.6	12.5	–
Infantry	12	66.7	–	–	–	–	–	–	–	–
Military enlisted tactical operations and air/weapons specialists and crew members, all other	14	50.0	35.7	–	–	–	–	21.4	–	–

[1] Based on the 2000 Standard Occupational Classification System
[2] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[3] Includes highway, nonhighway, air, water, and rail fatalities.
[4] "Highway" includes deaths to vehicle occupants resulting from traffic incidents that occur on the public roadway, shoulder, or surrounding area. It excludes incidents occurring entirely off the roadway, such as in parking lots and on farms; incidents involving trains; and deaths to pedestrians or other non-passengers.
[5] Includes violence by persons, self-inflicted injury, and assaults by animals.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 7 fatalities for which there was insufficient information to determine a specific occupation classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Total	5,575	12.5	10.8	8.7	4.4	2.2	3.6
Management occupations	635	8.0	6.0	5.7	2.7	.8	1.9
Top executives	42	9.5	–	–	–	–	–
Chief executives	20	15.0	–	–	–	–	–
Chief executives	20	15.0	–	–	–	–	–
General and operations managers	21	–	–	–	–	–	–
General and operations managers	21	–	–	–	–	–	–
Advertising, marketing, promotions, public relations, and sales managers	14	–	–	21.4	–	–	–
Marketing and sales managers	12	–	–	25.0	–	–	–
Sales managers	11	–	–	–	–	–	–
Operations specialties managers	34	8.8	–	–	–	–	–
Financial managers	8	–	–	–	–	–	–
Financial managers	8	–	–	–	–	–	–
Human resources managers	3	–	–	–	–	–	–
Industrial production managers	9	–	–	–	–	–	–
Industrial production managers	9	–	–	–	–	–	–
Transportation, storage, and distribution managers	11	–	–	–	–	–	–
Transportation, storage, and distribution managers	11	–	–	–	–	–	–
Other management occupations	545	8.1	6.4	5.3	2.8	.7	1.7
Agricultural managers	360	6.1	4.4	3.3	1.7	–	1.1
Farm, ranch, and other agricultural managers	28	–	–	–	–	–	–
Farmers and ranchers	332	6.3	4.5	3.0	1.8	–	1.2
Construction managers	64	20.3	18.8	12.5	7.8	–	–
Construction managers	64	20.3	18.8	12.5	7.8	–	–
Education administrators	9	–	–	–	–	–	–
Education administrators, elementary and secondary school	4	–	–	–	–	–	–
Engineering managers	3	–	–	–	–	–	–
Engineering managers	3	–	–	–	–	–	–
Food service managers	39	–	–	–	–	–	–
Food service managers	39	–	–	–	–	–	–
Lodging managers	14	–	–	–	–	–	–
Lodging managers	14	–	–	–	–	–	–
Property, real estate, and community association managers	12	–	–	–	–	–	–
Property, real estate, and community association managers	12	–	–	–	–	–	–
Social and community service managers	4	–	–	–	–	–	–
Social and community service managers	4	–	–	–	–	–	–
Miscellaneous managers	35	11.4	8.6	8.6	–	–	–
Managers, all other	35	11.4	8.6	8.6	–	–	–
Business and financial operations occupations	32	12.5	9.4	–	–	–	–
Business operations specialists	11	27.3	–	–	–	–	–
Human resources, training, and labor relations specialists	4	–	–	–	–	–	–
Financial specialists	21	–	–	–	–	–	–
Accountants and auditors	10	–	–	–	–	–	–
Accountants and auditors	10	–	–	–	–	–	–
Financial analysts and advisors	4	–	–	–	–	–	–
Personal financial advisors	4	–	–	–	–	–	–
Loan counselors and officers	4	–	–	–	–	–	–
Loan officers	4	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Computer and mathematical occupations	8	–	–	–	–	–	–
Computer specialists	7	–	–	–	–	–	–
Architecture and engineering occupations	54	11.1	9.3	11.1	–	–	–
Architects, surveyors, and cartographers	7	–	–	–	–	–	–
Architects, except naval	4	–	–	–	–	–	–
Architects, except landscape and naval	4	–	–	–	–	–	–
Surveyors, cartographers, and photogrammetrists	3	–	–	–	–	–	–
Surveyors	3	–	–	–	–	–	–
Engineers	28	–	–	10.7	–	–	–
Civil engineers	4	–	–	–	–	–	–
Civil engineers	4	–	–	–	–	–	–
Electrical and electronics engineers	4	–	–	–	–	–	–
Electrical engineers	3	–	–	–	–	–	–
Industrial engineers, including health and safety	3	–	–	–	–	–	–
Industrial engineers	3	–	–	–	–	–	–
Mechanical engineers	7	–	–	–	–	–	–
Mechanical engineers	7	–	–	–	–	–	–
Petroleum engineers	6	–	–	–	–	–	–
Petroleum engineers	6	–	–	–	–	–	–
Drafters, engineering, and mapping technicians	19	–	–	–	–	–	–
Engineering technicians, except drafters	15	–	–	–	–	–	–
Electrical and electronic engineering technicians	5	–	–	–	–	–	–
Engineering technicians, except drafters, all other	5	–	–	–	–	–	–
Life, physical, and social science occupations	20	–	–	–	–	–	20.0
Life scientists	8	–	–	–	–	–	–
Biological scientists	5	–	–	–	–	–	–
Physical scientists	4	–	–	–	–	–	–
Life, physical, and social science technicians	7	–	–	–	–	–	57.1
Chemical technicians	4	–	–	–	–	–	100.0
Chemical technicians	4	–	–	–	–	–	100.0
Community and social services occupations	29	–	–	–	–	–	–
Counselors, social workers, and other community and social service specialists	16	–	–	–	–	–	–
Social workers	10	–	–	–	–	–	–
Mental health and substance abuse social workers	3	–	–	–	–	–	–
Social workers, all other	4	–	–	–	–	–	–
Miscellaneous community and social service specialists	4	–	–	–	–	–	–
Religious workers	13	–	–	–	–	–	–
Clergy	10	–	–	–	–	–	–
Clergy	10	–	–	–	–	–	–
Legal occupations	15	–	–	–	–	–	–
Lawyers, judges, and related workers	11	–	–	–	–	–	–
Lawyers	11	–	–	–	–	–	–
Lawyers	11	–	–	–	–	–	–
Legal support workers	4	–	–	–	–	–	–
Miscellaneous legal support workers	3	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Education, training, and library occupations	30	16.7	–	–	–	–	–
Postsecondary teachers	10	–	–	–	–	–	–
Miscellaneous postsecondary teachers	9	–	–	–	–	–	–
Vocational education teachers, postsecondary	5	–	–	–	–	–	–
Postsecondary teachers, all other	4	–	–	–	–	–	–
Primary, secondary, and special education school teachers	10	–	–	–	–	–	–
Elementary and middle school teachers	3	–	–	–	–	–	–
Elementary school teachers, except special education	3	–	–	–	–	–	–
Secondary school teachers	5	–	–	–	–	–	–
Secondary school teachers, except special and vocational education	5	–	–	–	–	–	–
Other teachers and instructors	3	–	–	–	–	–	–
Librarians, curators, and archivists	4	–	–	–	–	–	–
Librarians	4	–	–	–	–	–	–
Librarians	4	–	–	–	–	–	–
Other education, training, and library occupations	3	–	–	–	–	–	–
Arts, design, entertainment, sports, and media occupations	58	8.6	6.9	15.5	–	6.9	–
Art and design workers	10	–	–	–	–	–	–
Artists and related workers	4	–	–	–	–	–	–
Designers	6	–	–	–	–	–	–
Entertainers and performers, sports and related workers	30	–	–	23.3	–	10.0	–
Athletes, coaches, umpires, and related workers	20	–	–	25.0	–	–	–
Athletes and sports competitors	14	–	–	–	–	–	–
Coaches and scouts	6	–	–	50.0	–	–	–
Miscellaneous entertainers and performers, sports and related workers	5	–	–	–	–	–	–
Entertainers and performers, sports and related workers, all other	5	–	–	–	–	–	–
Media and communication workers	12	–	–	–	–	–	–
News analysts, reporters and correspondents	3	–	–	–	–	–	–
Reporters and correspondents	3	–	–	–	–	–	–
Media and communication equipment workers	6	–	–	–	–	–	–
Photographers	4	–	–	–	–	–	–
Photographers	4	–	–	–	–	–	–
Healthcare practitioners and technical occupations	49	6.1	–	10.2	–	10.2	–
Health diagnosing and treating practitioners	30	–	–	16.7	–	16.7	–
Dentists	5	–	–	–	–	–	–
Dentists, general	4	–	–	–	–	–	–
Physicians and surgeons	13	–	–	–	–	–	–
Surgeons	3	–	–	–	–	–	–
Physicians and surgeons, all other	7	–	–	–	–	–	–
Registered nurses	7	–	–	42.9	–	42.9	–
Registered nurses	7	–	–	42.9	–	42.9	–
Veterinarians	4	–	–	–	–	–	–
Veterinarians	4	–	–	–	–	–	–
Health technologists and technicians	16	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Emergency medical technicians and paramedics	7	–	–	–	–	–	–
Emergency medical technicians and paramedics	7	–	–	–	–	–	–
Licensed practical and licensed vocational nurses	4	–	–	–	–	–	–
Licensed practical and licensed vocational nurses	4	–	–	–	–	–	–
Other healthcare practitioners and technical occupations	3	–	–	–	–	–	–
Healthcare support occupations	20	30.0	20.0	–	–	–	–
Nursing, psychiatric, and home health aides	14	42.9	28.6	–	–	–	–
Nursing, psychiatric, and home health aides	14	42.9	28.6	–	–	–	–
Home health aides	4	–	–	–	–	–	–
Nursing aides, orderlies, and attendants	10	50.0	30.0	–	–	–	–
Other healthcare support occupations	5	–	–	–	–	–	–
Miscellaneous healthcare support occupations	4	–	–	–	–	–	–
Protective service occupations	312	3.8	2.6	3.2	–	1.6	4.8
First-line supervisors/managers, protective service workers	24	–	–	–	–	–	–
First-line supervisors/managers, law enforcement workers	12	–	–	–	–	–	–
First-line supervisors/managers of police and detectives	10	–	–	–	–	–	–
First-line supervisors/managers, fire fighting and prevention workers	4	–	–	–	–	–	–
First-line supervisors/managers of fire fighting and prevention workers	4	–	–	–	–	–	–
Miscellaneous first-line supervisors/managers, protective service workers	8	–	–	–	–	–	–
First-line supervisors/managers, protective service workers, all other	8	–	–	–	–	–	–
Fire fighting and prevention workers	45	–	–	–	–	–	26.7
Fire fighters	45	–	–	–	–	–	26.7
Fire fighters	45	–	–	–	–	–	26.7
Law enforcement workers	153	2.0	–	2.6	–	–	–
Bailiffs, correctional officers, and jailers	11	–	–	–	–	–	–
Correctional officers and jailers	11	–	–	–	–	–	–
Detectives and criminal investigators	9	–	–	–	–	–	–
Detectives and criminal investigators	9	–	–	–	–	–	–
Fish and game wardens	3	–	–	–	–	–	–
Fish and game wardens	3	–	–	–	–	–	–
Police officers	129	–	–	3.1	–	–	–
Police and sheriff's patrol officers	128	–	–	3.1	–	–	–
Other protective service workers	90	6.7	4.4	5.6	–	4.4	–
Security guards and gaming surveillance officers	71	8.5	5.6	7.0	–	5.6	–
Security guards	71	8.5	5.6	7.0	–	5.6	–
Miscellaneous protective service workers	18	–	–	–	–	–	–
Crossing guards	17	–	–	–	–	–	–
Food preparation and serving related occupations	72	13.9	5.6	9.7	–	6.9	–
Supervisors, food preparation and serving workers	20	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
First-line supervisors/managers, food preparation and serving workers	20	–	–	–	–	–	–
Chefs and head cooks	4	–	–	–	–	–	–
First-line supervisors/managers of food preparation and serving workers	16	–	–	–	–	–	–
Cooks and food preparation workers	18	–	–	16.7	–	–	–
Cooks	16	–	–	18.8	–	–	–
Cooks, fast food	7	–	–	–	–	–	–
Cooks, restaurant	5	–	–	–	–	–	–
Food and beverage serving workers	28	14.3	–	14.3	–	10.7	–
Bartenders	8	–	–	–	–	–	–
Bartenders	8	–	–	–	–	–	–
Fast food and counter workers	10	30.0	–	–	–	–	–
Combined food preparation and serving workers, including fast food	8	37.5	–	–	–	–	–
Waiters and waitresses	10	–	–	–	–	–	–
Waiters and waitresses	10	–	–	–	–	–	–
Other food preparation and serving related workers	6	66.7	50.0	–	–	–	–
Dishwashers	5	60.0	–	–	–	–	–
Dishwashers	5	60.0	–	–	–	–	–
Building and grounds cleaning and maintenance occupations	247	25.5	23.1	12.1	7.3	1.6	2.8
Supervisors, building and grounds cleaning and maintenance workers	41	19.5	17.1	9.8	7.3	–	–
First-line supervisors/managers, building and grounds cleaning and maintenance workers	41	19.5	17.1	9.8	7.3	–	–
First-line supervisors/managers of housekeeping and janitorial workers	9	–	–	–	–	–	–
First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers	32	18.8	18.8	12.5	9.4	–	–
Building cleaning and pest control workers	50	40.0	32.0	8.0	–	6.0	10.0
Building cleaning workers	48	41.7	33.3	8.3	–	6.2	10.4
Janitors and cleaners, except maids and housekeeping cleaners	43	44.2	34.9	9.3	–	7.0	9.3
Maids and housekeeping cleaners	5	–	–	–	–	–	–
Grounds maintenance workers	156	22.4	21.8	14.1	9.6	–	–
Grounds maintenance workers	156	22.4	21.8	14.1	9.6	–	–
Landscaping and groundskeeping workers	80	12.5	11.2	10.0	3.8	–	–
Tree trimmers and pruners	67	35.8	35.8	17.9	16.4	–	–
Grounds maintenance workers, all other	7	–	–	–	–	–	–
Personal care and service occupations	53	5.7	–	11.3	–	–	–
Animal care and service workers	18	–	–	–	–	–	–
Animal trainers	8	–	–	–	–	–	–
Animal trainers	8	–	–	–	–	–	–
Nonfarm animal caretakers	10	–	–	–	–	–	–
Nonfarm animal caretakers	10	–	–	–	–	–	–
Entertainment attendants and related workers	10	–	–	–	–	–	–
Miscellaneous entertainment attendants and related workers	7	–	–	–	–	–	–
Amusement and recreation attendants	6	–	–	–	–	–	–
Personal appearance workers	7	–	–	–	–	–	–
Barbers and cosmetologists	6	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Barbers	4	–	–	–	–	–	–
Transportation, tourism, and lodging attendants	5	–	–	–	–	–	–
Tour and travel guides	3	–	–	–	–	–	–
Tour guides and escorts	3	–	–	–	–	–	–
Other personal care and service workers	10	–	–	–	–	–	–
Recreation and fitness workers	3	–	–	–	–	–	–
Recreation workers	3	–	–	–	–	–	–
Miscellaneous personal care and service workers	3	–	–	–	–	–	–
Personal care and service workers, all other	3	–	–	–	–	–	–
Sales and related occupations	348	4.9	3.4	3.4	1.1	1.1	0.9
Supervisors, sales workers	161	5.0	3.7	3.7	1.9	–	–
First-line supervisors/managers, sales workers	161	5.0	3.7	3.7	1.9	–	–
First-line supervisors/managers of retail sales workers	124	4.0	2.4	–	–	–	–
First-line supervisors/managers of non-retail sales workers	37	8.1	8.1	10.8	–	–	–
Retail sales workers	106	5.7	3.8	2.8	–	–	–
Cashiers	50	–	–	–	–	–	–
Cashiers	50	–	–	–	–	–	–
Counter and rental clerks and parts salespersons	9	–	–	–	–	–	–
Counter and rental clerks	6	–	–	–	–	–	–
Parts salespersons	3	–	–	–	–	–	–
Retail salespersons	47	8.5	6.4	–	–	–	–
Retail salespersons	47	8.5	6.4	–	–	–	–
Sales representatives, services	14	–	–	–	–	–	–
Miscellaneous sales representatives, services	8	–	–	–	–	–	–
Sales representatives, services, all other	8	–	–	–	–	–	–
Sales representatives, wholesale and manufacturing	27	–	–	–	–	–	–
Sales representatives, wholesale and manufacturing	27	–	–	–	–	–	–
Sales representatives, wholesale and manufacturing, technical and scientific products	10	–	–	–	–	–	–
Sales representatives, wholesale and manufacturing, except technical and scientific products	17	–	–	–	–	–	–
Other sales and related workers	40	–	–	–	–	–	–
Real estate brokers and sales agents	12	–	–	–	–	–	–
Real estate sales agents	10	–	–	–	–	–	–
Miscellaneous sales and related workers	26	–	–	–	–	–	–
Door-to-door sales workers, news and street vendors, and related workers	23	–	–	–	–	–	–
Sales and related workers, all other	3	–	–	–	–	–	–
Office and administrative support occupations	112	9.8	3.6	3.6	–	–	–
Supervisors, office and administrative support workers	7	42.9	–	–	–	–	–
First-line supervisors/managers of office and administrative support workers	7	42.9	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
First-line supervisors/managers of office and administrative support workers	7	42.9	–	–	–	–	–
Financial clerks	11	–	–	–	–	–	–
Bill and account collectors	3	–	–	–	–	–	–
Bill and account collectors	3	–	–	–	–	–	–
Bookkeeping, accounting, and auditing clerks	3	–	–	–	–	–	–
Bookkeeping, accounting, and auditing clerks	3	–	–	–	–	–	–
Tellers	3	–	–	–	–	–	–
Tellers	3	–	–	–	–	–	–
Information and record clerks	11	–	–	–	–	–	–
Customer service representatives	4	–	–	–	–	–	–
Customer service representatives	4	–	–	–	–	–	–
Material recording, scheduling, dispatching, and distributing workers	56	5.4	–	–	–	–	–
Couriers and messengers	12	–	–	–	–	–	–
Couriers and messengers	12	–	–	–	–	–	–
Dispatchers	4	–	–	–	–	–	–
Dispatchers, except police, fire, and ambulance	3	–	–	–	–	–	–
Postal service workers	12	–	–	–	–	–	–
Postal service mail carriers	11	–	–	–	–	–	–
Shipping, receiving, and traffic clerks	5	–	–	–	–	–	–
Shipping, receiving, and traffic clerks	5	–	–	–	–	–	–
Stock clerks and order fillers	18	16.7	–	–	–	–	–
Stock clerks and order fillers	18	16.7	–	–	–	–	–
Secretaries and administrative assistants	10	–	–	–	–	–	–
Secretaries and administrative assistants	10	–	–	–	–	–	–
Secretaries, except legal, medical, and executive	7	–	–	–	–	–	–
Other office and administrative support workers	17	–	–	–	–	–	–
Office clerks, general	8	–	–	–	–	–	–
Office clerks, general	8	–	–	–	–	–	–
Miscellaneous office and administrative support workers	4	–	–	–	–	–	–
Office and administrative support workers, all other	4	–	–	–	–	–	–
Farming, fishing, and forestry occupations	305	3.6	3.0	10.5	1.0	3.3	2.0
Supervisors, farming, fishing, and forestry workers	11	–	–	–	–	–	–
First-line supervisors/managers of farming, fishing, and forestry workers	11	–	–	–	–	–	–
First-line supervisors/managers of farming, fishing, and forestry workers	11	–	–	–	–	–	–
Agricultural workers	136	5.1	4.4	15.4	2.2	5.9	2.9
Miscellaneous agricultural workers	130	4.6	3.8	15.4	2.3	5.4	3.1
Agricultural equipment operators	12	–	–	–	–	–	–
Farmworkers and laborers, crop, nursery, and greenhouse	63	9.5	7.9	17.5	4.8	6.3	–
Farmworkers, farm and ranch animals	52	–	–	17.3	–	5.8	–
Agricultural workers, all other	3	–	–	–	–	–	–
Fishing and hunting workers	50	–	–	16.0	–	–	–
Fishers and related fishing workers	48	–	–	16.7	–	–	–
Fishers and related fishing workers	48	–	–	16.7	–	–	–
Forest, conservation, and logging workers	108	3.7	2.8	–	–	–	–
Forest and conservation workers	3	–	–	–	–	–	–
Forest and conservation workers	3	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Logging workers	105	2.9	–	–	–	–	–
Fallers	57	–	–	–	–	–	–
Logging equipment operators	25	–	–	–	–	–	–
Logging workers, all other	22	–	–	–	–	–	–
Construction and extraction occupations	1,038	31.8	31.2	14.8	10.0	2.4	2.7
Supervisors, construction and extraction workers	112	26.8	26.8	12.5	8.9	2.7	–
First-line supervisors/managers of construction trades and extraction workers	112	26.8	26.8	12.5	8.9	2.7	–
First-line supervisors/managers of construction trades and extraction workers	112	26.8	26.8	12.5	8.9	2.7	–
Construction trades workers	788	35.0	34.3	15.0	10.0	2.7	2.0
Boilermakers	4	–	–	–	–	–	–
Boilermakers	4	–	–	–	–	–	–
Brickmasons, blockmasons, and stonemasons	13	46.2	46.2	–	–	–	–
Brickmasons and blockmasons	11	45.5	45.5	–	–	–	–
Carpenters	96	60.4	59.4	6.2	–	–	–
Carpenters	96	60.4	59.4	6.2	–	–	–
Carpet, floor, and tile installers and finishers	3	–	–	–	–	–	–
Cement masons, concrete finishers, and terrazzo workers	12	–	–	–	–	–	–
Cement masons and concrete finishers	12	–	–	–	–	–	–
Construction laborers	290	24.5	24.5	10.7	6.6	1.7	–
Construction laborers	290	24.5	24.5	10.7	6.6	1.7	–
Construction equipment operators	63	–	–	9.5	6.3	–	–
Paving, surfacing, and tamping equipment operators	5	–	–	–	–	–	–
Operating engineers and other construction equipment operators	57	–	–	8.8	5.3	–	–
Drywall installers, ceiling tile installers, and tapers	13	61.5	61.5	–	–	–	–
Drywall and ceiling tile installers	13	61.5	61.5	–	–	–	–
Electricians	87	23.0	21.8	47.1	42.5	–	4.6
Electricians	87	23.0	21.8	47.1	42.5	–	4.6
Glaziers	4	–	–	–	–	–	–
Glaziers	4	–	–	–	–	–	–
Insulation workers	3	100.0	100.0	–	–	–	–
Insulation workers, floor, ceiling, and wall	3	100.0	100.0	–	–	–	–
Painters and paperhangers	57	52.6	50.9	26.3	15.8	8.8	8.8
Painters, construction and maintenance	56	51.8	50.0	26.8	16.1	8.9	8.9
Pipelayers, plumbers, pipefitters, and steamfitters	38	13.2	10.5	10.5	–	–	10.5
Pipelayers	6	–	–	–	–	–	–
Plumbers, pipefitters, and steamfitters	32	15.6	12.5	12.5	–	–	12.5
Plasterers and stucco masons	8	–	–	37.5	–	–	–
Plasterers and stucco masons	8	–	–	37.5	–	–	–
Roofers	55	78.2	76.4	7.3	–	–	–
Roofers	55	78.2	76.4	7.3	–	–	–
Sheet metal workers	5	–	–	–	–	–	–
Sheet metal workers	5	–	–	–	–	–	–
Structural iron and steel workers	37	56.8	54.1	–	–	–	–
Structural iron and steel workers	37	56.8	54.1	–	–	–	–
Helpers, construction trades	26	26.9	26.9	30.8	23.1	–	–
Helpers, construction trades	26	26.9	26.9	30.8	23.1	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Helpers--brickmasons, blockmasons, stonemasons, and tile and marble setters	3	–	–	–	–	–	–
Helpers--electricians	4	–	–	–	–	–	–
Helpers--pipelayers, plumbers, pipefitters, and steamfitters	3	–	–	–	–	–	–
Helpers--roofers	5	80.0	80.0	–	–	–	–
Helpers, construction trades, all other	8	–	–	37.5	37.5	–	–
Other construction and related workers	44	29.5	29.5	6.8	–	–	–
Construction and building inspectors	6	–	–	–	–	–	–
Construction and building inspectors	6	–	–	–	–	–	–
Hazardous materials removal workers	4	–	–	–	–	–	–
Hazardous materials removal workers	4	–	–	–	–	–	–
Highway maintenance workers	17	–	–	–	–	–	–
Highway maintenance workers	17	–	–	–	–	–	–
Miscellaneous construction and related workers	11	54.5	54.5	–	–	–	–
Construction and related workers, all other	11	54.5	54.5	–	–	–	–
Extraction workers	68	5.9	5.9	16.2	11.8	–	14.7
Derrick, rotary drill, and service unit operators, oil, gas, and mining	12	–	–	–	–	–	–
Derrick operators, oil and gas	4	–	–	–	–	–	–
Rotary drill operators, oil and gas	8	–	–	–	–	–	–
Earth drillers, except oil and gas	12	–	–	41.7	41.7	–	–
Earth drillers, except oil and gas	12	–	–	41.7	41.7	–	–
Mining machine operators	11	–	–	–	–	–	–
Continuous mining machine operators	3	–	–	–	–	–	–
Mining machine operators, all other	8	–	–	–	–	–	–
Roustabouts, oil and gas	8	–	–	37.5	–	–	–
Roustabouts, oil and gas	8	–	–	37.5	–	–	–
Helpers--extraction workers	4	–	–	–	–	–	–
Helpers--extraction workers	4	–	–	–	–	–	–
Miscellaneous extraction workers	19	–	–	–	–	–	–
Extraction workers, all other	19	–	–	–	–	–	–
Installation, maintenance, and repair occupations	394	17.3	15.5	20.1	15.7	2.8	8.4
Supervisors of installation, maintenance, and repair workers	34	23.5	17.6	17.6	11.8	–	–
First-line supervisors/managers of mechanics, installers, and repairers	34	23.5	17.6	17.6	11.8	–	–
First-line supervisors/managers of mechanics, installers, and repairers	34	23.5	17.6	17.6	11.8	–	–
Electrical and electronic equipment mechanics, installers, and repairers	20	30.0	30.0	15.0	15.0	–	–
Computer, automated teller, and office machine repairers	4	–	–	–	–	–	–
Computer, automated teller, and office machine repairers	4	–	–	–	–	–	–
Radio and telecommunications equipment installers and repairers	11	45.5	45.5	–	–	–	–
Telecommunications equipment installers and repairers, except line installers	10	40.0	40.0	–	–	–	–
Miscellaneous electrical and electronic equipment mechanics, installers, and repairers	5	–	–	–	–	–	–
Vehicle and mobile equipment mechanics, installers, and repairers	122	5.7	4.9	4.9	–	4.1	14.8

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Aircraft mechanics and service technicians	3	–	–	–	–	–	–
Aircraft mechanics and service technicians	3	–	–	–	–	–	–
Automotive technicians and repairers	69	–	–	5.8	–	5.8	11.6
Automotive body and related repairers	11	–	–	–	–	–	–
Automotive service technicians and mechanics	57	–	–	7.0	–	7.0	12.3
Bus and truck mechanics and diesel engine specialists	17	–	–	–	–	–	17.6
Bus and truck mechanics and diesel engine specialists	17	–	–	–	–	–	17.6
Heavy vehicle and mobile equipment service technicians and mechanics	21	–	–	–	–	–	19.0
Farm equipment mechanics	3	–	–	–	–	–	–
Mobile heavy equipment mechanics, except engines	17	–	–	–	–	–	17.6
Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	10	–	–	–	–	–	30.0
Tire repairers and changers	8	–	–	–	–	–	37.5
Other installation, maintenance, and repair occupations	218	21.6	19.7	29.4	24.8	2.3	6.4
Heating, air conditioning, and refrigeration mechanics and installers	31	29.0	29.0	41.9	38.7	–	–
Heating, air conditioning, and refrigeration mechanics and installers	31	29.0	29.0	41.9	38.7	–	–
Industrial machinery installation, repair, and maintenance workers	97	19.6	16.5	16.5	13.4	3.1	7.2
Industrial machinery mechanics	26	–	–	23.1	15.4	–	–
Maintenance and repair workers, general	54	24.1	20.4	16.7	14.8	–	7.4
Maintenance workers, machinery	10	–	–	–	–	–	–
Millwrights	7	42.9	–	–	–	–	–
Line installers and repairers	54	27.8	27.8	44.4	44.4	–	–
Electrical power-line installers and repairers	38	21.1	21.1	55.3	55.3	–	–
Telecommunications line installers and repairers	16	43.8	43.8	18.8	18.8	–	–
Precision instrument and equipment repairers	4	–	–	75.0	–	–	–
Miscellaneous installation, maintenance, and repair workers	29	13.8	10.3	24.1	–	–	17.2
Commercial divers	6	–	–	–	–	–	–
Helpers--installation, maintenance, and repair workers	5	–	–	–	–	–	–
Installation, maintenance, and repair workers, all other	16	–	–	31.2	–	–	18.8
Production occupations	283	7.1	5.3	11.3	4.6	4.6	17.0
Transportation and material moving occupations	1,393	4.5	3.6	3.4	1.1	1.1	2.1
Supervisors, production workers	36	–	–	8.3	–	–	13.9
First-line supervisors/managers of production and operating workers	36	–	–	8.3	–	–	13.9
First-line supervisors/managers of production and operating workers	36	–	–	8.3	–	–	13.9
Assemblers and fabricators	34	–	–	11.8	–	–	–
Structural metal fabricators and fitters	3	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Structural metal fabricators and fitters	3	–	–	–	–	–	–
Miscellaneous assemblers and fabricators	29	–	–	10.3	–	–	–
Assemblers and fabricators, all other	26	–	–	11.5	–	–	–
Food processing workers	14	–	–	–	–	–	–
Butchers and other meat, poultry, and fish processing workers	9	–	–	–	–	–	–
Butchers and meat cutters	6	–	–	–	–	–	–
Meat, poultry, and fish cutters and trimmers	3	–	–	–	–	–	–
Miscellaneous food processing workers	3	–	–	–	–	–	–
Food and tobacco roasting, baking, and drying machine operators and tenders	3	–	–	–	–	–	–
Metal workers and plastic workers	83	9.6	7.2	13.3	7.2	3.6	22.9
Forming machine setters, operators, and tenders, metal and plastic	4	–	–	–	–	–	–
Machine tool cutting setters, operators, and tenders, metal and plastic	4	–	–	–	–	–	–
Machinists	5	–	–	–	–	–	–
Machinists	5	–	–	–	–	–	–
Metal furnace and kiln operators and tenders	3	–	–	–	–	–	–
Molders and molding machine setters, operators, and tenders, metal and plastic	5	–	–	–	–	–	–
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	4	–	–	–	–	–	–
Welding, soldering, and brazing workers	50	14.0	12.0	14.0	10.0	–	32.0
Welders, cutters, solderers, and brazers	48	14.6	12.5	12.5	8.3	–	33.3
Miscellaneous metalworkers and plastic workers	10	–	–	30.0	–	–	–
Metal workers and plastic workers, all other	7	–	–	–	–	–	–
Textile, apparel, and furnishings workers	7	–	–	–	–	–	–
Laundry and dry-cleaning workers	6	–	–	–	–	–	–
Laundry and dry-cleaning workers	6	–	–	–	–	–	–
Woodworkers	7	–	–	–	–	–	–
Woodworking machine setters, operators, and tenders	4	–	–	–	–	–	–
Sawing machine setters, operators, and tenders, wood	3	–	–	–	–	–	–
Plant and system operators	15	–	–	–	–	–	20.0
Stationary engineers and boiler operators	6	–	–	–	–	–	–
Stationary engineers and boiler operators	6	–	–	–	–	–	–
Water and liquid waste treatment plant and system operators	5	–	–	–	–	–	–
Water and liquid waste treatment plant and system operators	5	–	–	–	–	–	–
Miscellaneous plant and system operators	3	–	–	–	–	–	–
Other production occupations	85	4.7	3.5	11.8	4.7	4.7	20.0
Chemical processing machine setters, operators, and tenders	3	–	–	–	–	–	–
Chemical equipment operators and tenders	3	–	–	–	–	–	–
Crushing, grinding, polishing, mixing, and blending workers	7	–	–	–	–	–	–
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	4	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	4	–	–	–	–	–	–
Furnace, kiln, oven, drier, and kettle operators and tenders	5	–	–	–	–	–	–
Furnace, kiln, oven, drier, and kettle operators and tenders	5	–	–	–	–	–	–
Inspectors, testers, sorters, samplers, and weighers	9	–	–	–	–	–	–
Inspectors, testers, sorters, samplers, and weighers	9	–	–	–	–	–	–
Packaging and filling machine operators and tenders	4	–	–	–	–	–	–
Packaging and filling machine operators and tenders	4	–	–	–	–	–	–
Miscellaneous production workers	50	–	–	14.0	–	6.0	20.0
Helpers--production workers	8	–	–	–	–	–	–
Production workers, all other	36	–	–	19.4	–	8.3	19.4
Supervisors, transportation and material moving workers	16	18.8	18.8	–	–	–	–
First-line supervisors/managers of helpers, laborers, and material movers, hand	10	30.0	30.0	–	–	–	–
First-line supervisors/managers of helpers, laborers, and material movers, hand	10	30.0	30.0	–	–	–	–
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	6	–	–	–	–	–	–
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	6	–	–	–	–	–	–
Air transportation workers	114	–	–	–	–	–	–
Aircraft pilots and flight engineers	114	–	–	–	–	–	–
Airline pilots, copilots, and flight engineers	18	–	–	–	–	–	–
Commercial pilots	96	–	–	–	–	–	–
Motor vehicle operators	956	3.2	2.4	1.7	0.7	.7	.9
Bus drivers	20	–	–	–	–	–	–
Bus drivers, transit and intercity	12	–	–	–	–	–	–
Bus drivers, school	8	–	–	–	–	–	–
Driver/sales workers and truck drivers	862	3.2	2.6	1.9	.8	.8	1.0
Driver/sales workers	44	–	–	–	–	–	–
Truck drivers, heavy and tractor-trailer	722	3.6	2.9	1.9	1.0	.7	1.2
Truck drivers, light or delivery services	96	–	–	–	–	–	–
Taxi drivers and chauffeurs	64	–	–	–	–	–	–
Taxi drivers and chauffeurs	64	–	–	–	–	–	–
Miscellaneous motor vehicle operators	10	–	–	–	–	–	–
Motor vehicle operators, all other	10	–	–	–	–	–	–
Rail transportation workers	16	–	–	–	–	–	–
Railroad brake, signal, and switch operators	5	–	–	–	–	–	–
Railroad brake, signal, and switch operators	5	–	–	–	–	–	–
Railroad conductors and yardmasters	8	–	–	–	–	–	–
Railroad conductors and yardmasters	8	–	–	–	–	–	–
Water transportation workers	27	–	–	14.8	–	–	–
Sailors and marine oilers	13	–	–	–	–	–	–
Sailors and marine oilers	13	–	–	–	–	–	–
Ship and boat captains and operators	10	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-4. **Fatal occupational injuries by occupation and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003 — Continued**

Occupation[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious sub-stances	
Captains, mates, and pilots of water vessels	10	–	–	–	–	–	–
Ship engineers	4	–	–	–	–	–	–
Ship engineers	4	–	–	–	–	–	–
Other transportation workers	13	–	–	–	–	–	–
Parking lot attendants	4	–	–	–	–	–	–
Parking lot attendants	4	–	–	–	–	–	–
Service station attendants	5	–	–	–	–	–	–
Service station attendants	5	–	–	–	–	–	–
Transportation inspectors	3	–	–	–	–	–	–
Transportation inspectors	3	–	–	–	–	–	–
Material moving workers	251	10.8	9.6	10.0	2.8	3.6	7.2
Crane and tower operators	14	–	–	–	–	–	–
Crane and tower operators	14	–	–	–	–	–	–
Dredge, excavating, and loading machine operators	15	20.0	–	–	–	–	–
Excavating and loading machine and dragline operators	14	21.4	–	–	–	–	–
Hoist and winch operators	3	–	–	–	–	–	–
Hoist and winch operators	3	–	–	–	–	–	–
Industrial truck and tractor operators	42	7.1	–	–	–	–	–
Industrial truck and tractor operators	42	7.1	–	–	–	–	–
Laborers and material movers, hand	117	14.5	14.5	16.2	5.1	6.8	10.3
Cleaners of vehicles and equipment	9	–	–	33.3	–	33.3	–
Laborers and freight, stock, and material movers, hand	106	16.0	16.0	14.2	5.7	4.7	11.3
Pumping station operators	6	–	–	–	–	–	50.0
Wellhead pumpers	6	–	–	–	–	–	50.0
Refuse and recyclable material collectors	43	–	–	7.0	–	–	–
Refuse and recyclable material collectors	43	–	–	7.0	–	–	–
Miscellaneous material moving workers	8	–	–	–	–	–	–
Material moving workers, all other	8	–	–	–	–	–	–
Military specific occupations	62	–	–	6.5	–	–	–
Military enlisted tactical operations and air/weapons specialists and crew members	32	–	–	–	–	–	–
Military enlisted tactical operations and air/weapons specialists and crew members	32	–	–	–	–	–	–
Infantry	12	–	–	–	–	–	–
Military enlisted tactical operations and air/weapons specialists and crew members, all other	14	–	–	–	–	–	–

[1] Based on the 2000 Standard Occupational Classification System
[2] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 7 fatalities for which there was insufficient information to determine a specific occupation classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-5. **Fatal occupational injuries by worker characteristics and selected event or exposure (transportation incidents, assaults and violent acts, and contact with object and equipment), 2003**

Worker Characteristics	Total fatalities (number)	Event or exposure[1] (percent)								
		Transportation incidents				Assaults and violent acts		Contact with object and equipment		
		Total[2]	Highway incidents[3]	Non-highway incidents	Worker struck by vehicle	Total[4]	Homicides	Total	Struck by object	Caught in equipment or object
Total	5,575	42.4	24.3	6.2	6.0	16.2	11.3	16.4	9.5	4.3
Employee status										
Wage and salary[5]	4,405	43.7	27.2	3.6	6.8	14.1	10.2	15.9	9.0	4.3
Self-employed[6]	1,170	37.4	13.1	16.2	3.2	23.8	15.5	18.0	11.4	4.1
Sex										
Men	5,129	42.1	23.7	6.5	5.9	14.8	10.0	17.5	10.3	4.5
Women	446	46.0	31.2	3.6	7.2	31.6	26.7	3.6	.7	1.6
Age[7]										
Under 16 years	25	64.0	24.0	36.0	–	–	–	24.0	–	–
16-17 years	28	50.0	25.0	–	14.3	–	–	21.4	10.7	–
18-19 years	84	39.3	23.8	6.0	4.8	15.5	11.9	23.8	14.3	7.1
20-24 years	462	37.7	22.5	5.2	5.2	18.8	13.9	17.5	8.0	6.1
25-34 years	1,018	42.2	26.0	4.3	5.7	18.2	14.4	14.8	7.7	4.1
35-44 years	1,329	39.4	23.6	3.7	5.9	16.9	11.8	17.5	9.7	5.0
45-54 years	1,301	43.0	26.7	4.7	5.6	15.6	10.8	15.6	10.4	3.0
55-64 years	802	45.8	23.2	7.1	8.1	14.2	8.4	16.2	9.5	4.7
65 years and older	523	47.2	19.7	18.4	5.7	14.0	8.8	15.9	11.3	2.9
Race or ethnic origin[8]										
White	3,988	45.4	25.8	7.0	5.8	13.6	7.7	16.0	9.4	4.1
Black or African American	543	41.1	27.8	3.7	5.9	23.8	22.3	15.3	7.4	5.0
Hispanic or Latino	794	31.7	17.4	5.0	7.7	16.1	13.1	21.3	12.5	5.5
American Indian or Alaskan Native	42	38.1	21.4	–	–	11.9	11.9	23.8	19.0	–
Asian	147	27.2	10.2	2.7	5.4	53.1	49.7	5.4	4.1	–
Native Hawaiian or Pacific Islander	11	–	–	–	–	27.3	–	–	–	–
Multiple races	3	–	–	–	–	–	–	–	–	–
Other races or not reported	47	40.4	23.4	–	–	34.0	34.0	8.5	6.4	–

1 Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
2 Includes highway, nonhighway, air, water, and rail fatalities.
3 "Highway" includes deaths to vehicle occupants resulting from traffic incidents that occur on the public roadway, shoulder, or surrounding area. It excludes incidents occurring entirely off the roadway, such as in parking lots and on farms; incidents involving trains; and deaths to pedestrians or other non-passengers.
4 Includes violence by persons, self-inflicted injury, and assaults by animals.
5 May include volunteers and other workers receiving compensation.
6 Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
7 There were 3 fatalities for which there was insufficient information to determine the age of the decedent.
8 Persons identified as Hispanic may be of any race. The individual racial categories shown exclude data for Hispanics.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-6. **Fatal occupational injuries by worker characteristics and selected event or exposure (falls, exposure to harmful substances or environments, and fires and explosions), 2003**

Worker Characteristics	Total fatalities (number)	Event or exposure[1] (percent)					
		Falls		Exposure to harmful substances or environments			Fires and explosions
		Total	Fall to lower level	Total	Contact with electric current	Exposure to caustic or noxious substances	
Total	5,575	12.5	10.8	8.7	4.4	2.2	3.6
Employee status							
Wage and salary[2]	4,405	12.7	11.0	9.2	4.7	2.3	3.9
Self-employed[3]	1,170	11.6	10.3	6.8	3.4	1.7	2.2
Sex							
Men	5,129	12.8	11.4	8.9	4.8	2.0	3.6
Women	446	8.5	4.3	6.5	–	4.3	3.1
Age[4]							
Under 16 years	25	–	–	–	–	–	–
16-17 years	28	–	–	17.9	–	–	–
18-19 years	84	10.7	10.7	9.5	7.1	–	–
20-24 years	462	8.9	8.9	12.1	6.9	2.4	5.0
25-34 years	1,018	9.8	9.1	11.5	6.5	2.5	3.3
35-44 years	1,329	11.5	10.2	9.9	5.3	2.8	4.4
45-54 years	1,301	14.1	12.5	7.7	3.4	2.5	3.5
55-64 years	802	14.7	12.7	5.9	2.5	1.2	2.9
65 years and older	523	17.2	11.3	3.4	1.1	.8	2.3
Race or ethnic origin[5]							
White	3,988	12.4	10.4	8.5	4.6	2.1	3.8
Black or African American	543	9.0	7.7	8.3	2.6	2.4	2.6
Hispanic or Latino	794	16.4	16.0	10.8	5.7	2.8	3.5
American Indian or Alaskan Native	42	14.3	11.9	–	–	–	–
Asian	147	7.5	6.8	5.4	–	–	–
Native Hawaiian or Pacific Islander	11	27.3	27.3	–	–	–	–
Multiple races	3	–	–	–	–	–	–
Other races or not reported	47	6.4	–	8.5	–	–	–

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[2] May include volunteers and other workers receiving compensation.
[3] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[4] There were 3 fatalities for which there was insufficient information to determine the age of the decedent.
[5] Persons identified as Hispanic may be of any race. The individual racial categories shown exclude data for Hispanics.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Total	3,873	100.0	532	100.0	1,170	100.0
Goods producing	1,757	45.4	46	8.6	644	55.0
Natural resources and mining	416	10.7	4	.8	434	37.1
Agriculture, forestry, fishing and hunting	279	7.2	4	.8	430	36.8
Crop production	76	2.0	–	–	258	22.1
Oilseed and grain farming	7	.2	–	–	28	2.4
Wheat farming	–	–	–	–	5	.4
Corn farming	3	.1	–	–	12	1.0
Other grain farming	–	–	–	–	3	.3
Vegetable and melon farming	12	.3	–	–	5	.4
Vegetable and melon farming	12	.3	–	–	5	.4
Potato farming	4	.1	–	–	–	–
Other vegetable and melon farming	5	.1	–	–	–	–
Fruit and tree nut farming	9	.2	–	–	4	.3
Noncitrus fruit and tree nut farming	7	.2	–	–	4	.3
Other noncitrus fruit farming	3	.1	–	–	–	–
Greenhouse and nursery production	13	.3	–	–	5	.4
Nursery and floriculture production	11	.3	–	–	–	–
Nursery and tree production	10	.3	–	–	–	–
Other crop farming	19	.5	–	–	58	5.0
Tobacco farming	–	–	–	–	7	.6
Sugarcane farming	5	.1	–	–	–	–
Hay farming	3	.1	–	–	8	.7
All other crop farming	7	.2	–	–	37	3.2
All other miscellaneous crop farming	7	.2	–	–	36	3.1
Animal production	53	1.4	–	–	106	9.1
Cattle ranching and farming	31	.8	–	–	85	7.3
Beef cattle ranching, farming, and feedlots	10	.3	–	–	29	2.5
Beef cattle ranching and farming	8	.2	–	–	29	2.5
Dairy cattle and milk production	19	.5	–	–	37	3.2
Hog and pig farming	5	.1	–	–	4	.3
Hog and pig farming	5	.1	–	–	4	.3
Poultry and egg production	4	.1	–	–	3	.3
Animal aquaculture	4	.1	–	–	–	–
Animal aquaculture	4	.1	–	–	–	–
Finfish farming and fish hatcheries	4	.1	–	–	–	–
Other animal production	7	.2	–	–	9	.8
Apiculture	–	–	–	–	3	.3
Horses and other equine production	5	.1	–	–	4	.3
Forestry and logging	83	2.1	–	–	37	3.2
Logging	83	2.1	–	–	35	3.0
Logging	83	2.1	–	–	35	3.0
Fishing, hunting and trapping	33	.9	–	–	16	1.4
Fishing	31	.8	–	–	16	1.4
Fishing	31	.8	–	–	16	1.4
Finfish fishing	3	.1	–	–	5	.4
Shellfish fishing	14	.4	–	–	8	.7
Agriculture and forestry support activities	32	.8	–	–	12	1.0
Support activities for crop production	16	.4	–	–	8	.7
Support activities for crop production	16	.4	–	–	8	.7
Soil preparation, planting, and cultivating	4	.1	–	–	–	–
Crop harvesting, primarily by machine	–	–	–	–	3	.3

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Other postharvest crop activities	3	0.1	–	–	–	–
Farm labor contractors and crew leaders	6	.2	–	–	–	–
Support activities for animal production	5	.1	–	–	3	0.3
Support activities for animal production	5	.1	–	–	3	.3
Support activities for forestry	11	.3	–	–	–	–
Support activities for forestry	11	.3	–	–	–	–
Mining[5]	137	3.5	–	–	4	.3
Oil and gas extraction	16	.4	–	–	–	–
Oil and gas extraction	16	.4	–	–	–	–
Oil and gas extraction	16	.4	–	–	–	–
Crude petroleum and natural gas extraction	15	.4	–	–	–	–
Mining, except oil and gas	53	1.4	–	–	–	–
Coal mining	27	.7	–	–	–	–
Coal mining	27	.7	–	–	–	–
Bituminous coal and lignite surface mining	6	.2	–	–	–	–
Bituminous coal underground mining	19	.5	–	–	–	–
Nonmetallic mineral mining and quarrying	23	.6	–	–	–	–
Stone mining and quarrying	9	.2	–	–	–	–
Dimension stone mining and quarrying	3	.1	–	–	–	–
Crushed and broken limestone mining	3	.1	–	–	–	–
Other crushed and broken stone mining	3	.1	–	–	–	–
Sand, gravel, clay, and refractory mining	13	.3	–	–	–	–
Construction sand and gravel mining	10	.3	–	–	–	–
Support activities for mining	68	1.8	–	–	–	–
Support activities for mining	68	1.8	–	–	–	–
Support activities for mining	68	1.8	–	–	–	–
Drilling oil and gas wells	26	.7	–	–	–	–
Support activities for oil and gas operations	41	1.1	–	–	–	–
Construction	940	24.3	40	7.5	191	16.3
Construction	940	24.3	40	7.5	191	16.3
Construction of buildings	171	4.4	–	–	56	4.8
Residential building construction	84	2.2	–	–	45	3.8
Residential building construction	84	2.2	–	–	45	3.8
New single-family general contractors	39	1.0	–	–	18	1.5
New multifamily general contractors	7	.2	–	–	–	–
Residential remodelers	14	.4	–	–	15	1.3
Nonresidential building construction	75	1.9	–	–	5	.4
Industrial building construction	19	.5	–	–	–	–
Commercial building construction	50	1.3	–	–	5	.4
Heavy and civil engineering construction	235	6.1	39	7.3	12	1.0
Utility system construction	129	3.3	–	–	–	–
Water and sewer system construction	65	1.7	–	–	–	–
Oil and gas pipeline construction	15	.4	–	–	–	–
Power and communication system construction	48	1.2	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Highway, street, and bridge construction	90	2.3	37	7.0	5	0.4
Highway, street, and bridge construction	90	2.3	37	7.0	5	.4
Other heavy construction	16	.4	–	–	3	.3
Other heavy construction	16	.4	–	–	3	.3
Specialty trade contractors	511	13.2	–	–	118	10.1
Building foundation and exterior contractors	196	5.1	–	–	32	2.7
Poured concrete structure contractors	22	.6	–	–	–	–
Residential poured foundation contractors	5	.1	–	–	–	–
Nonresidential poured foundation contractors	4	.1	–	–	–	–
Steel and precast concrete contractors	36	.9	–	–	–	–
Nonresidential structural steel contractors	18	.5	–	–	–	–
Framing contractors	18	.5	–	–	6	.5
Residential framing contractors	8	.2	–	–	3	.3
Masonry contractors	33	.9	–	–	3	.3
Residential masonry contractors	7	.2	–	–	–	–
Nonresidential masonry contractors	8	.2	–	–	–	–
Glass and glazing contractors	3	.1	–	–	–	–
Roofing contractors	61	1.6	–	–	15	1.3
Residential roofing contractors	16	.4	–	–	8	.7
Nonresidential roofing contractors	12	.3	–	–	–	–
Siding contractors	11	.3	–	–	–	–
Other building exterior contractors	11	.3	–	–	4	.3
Other nonresidential exterior contractors	5	.1	–	–	–	–
Building equipment contractors	141	3.6	–	–	19	1.6
Electrical contractors	70	1.8	–	–	9	.8
Residential electrical contractors	7	.2	–	–	–	–
Nonresidential electrical contractors	31	.8	–	–	–	–
Plumbing and HVAC contractors	59	1.5	–	–	10	.9
Residential plumbing and HVAC contractors	16	.4	–	–	–	–
Nonresidential plumbing and HVAC contractors	21	.5	–	–	–	–
Other building equipment contractors	11	.3	–	–	–	–
Other nonresidential equipment contractors	6	.2	–	–	–	–
Building finishing contractors	74	1.9	–	–	30	2.6
Drywall and insulation contractors	17	.4	–	–	5	.4
Residential drywall contractors	6	.2	–	–	4	.3
Painting and wall covering contractors	36	.9	–	–	19	1.6
Residential painting contractors	9	.2	–	–	8	.7
Nonresidential painting contractors	9	.2	–	–	–	–
Flooring contractors	4	.1	–	–	–	–
Tile and terrazzo contractors	5	.1	–	–	–	–
Finish carpentry contractors	7	.2	–	–	3	.3
Other building finishing contractors	4	.1	–	–	–	–
Other specialty trade contractors	95	2.5	–	–	33	2.8
Site preparation contractors	64	1.7	–	–	20	1.7
Residential site preparation contractors	10	.3	–	–	4	.3

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Nonresidential site preparation contractors	28	0.7	–	–	4	0.3
All other specialty trade contractors	31	.8	–	–	13	1.1
All other residential trade contractors	10	.3	–	–	3	.3
All other nonresidential trade contractors	6	.2	–	–	3	.3
Manufacturing	401	10.4	–	–	19	1.6
Manufacturing	401	10.4	–	–	19	1.6
Food manufacturing	57	1.5	–	–	–	–
Animal food manufacturing	4	.1	–	–	–	–
Animal food manufacturing	4	.1	–	–	–	–
Other animal food manufacturing	3	.1	–	–	–	–
Grain and oilseed milling	5	.1	–	–	–	–
Fruit and vegetable preserving and specialty	5	.1	–	–	–	–
Fruit and vegetable canning and drying	4	.1	–	–	–	–
Fruit and vegetable canning	4	.1	–	–	–	–
Dairy product manufacturing	6	.2	–	–	–	–
Dairy product, except frozen, manufacturing	5	.1	–	–	–	–
Fluid milk manufacturing	5	.1	–	–	–	–
Animal slaughtering and processing	18	.5	–	–	–	–
Animal slaughtering and processing	18	.5	–	–	–	–
Meat processed from carcasses	4	.1	–	–	–	–
Poultry processing	10	.3	–	–	–	–
Bakeries and tortilla manufacturing	7	.2	–	–	–	–
Bread and bakery product manufacturing	5	.1	–	–	–	–
Commercial bakeries	4	.1	–	–	–	–
Other food manufacturing	8	.2	–	–	–	–
Seasoning and dressing manufacturing	3	.1	–	–	–	–
Spice and extract manufacturing	3	.1	–	–	–	–
All other food manufacturing	3	.1	–	–	–	–
Beverage and tobacco product manufacturing	6	.2	–	–	–	–
Beverage manufacturing	6	.2	–	–	–	–
Soft drink and ice manufacturing	6	.2	–	–	–	–
Soft drink manufacturing	6	.2	–	–	–	–
Textile mills	7	.2	–	–	–	–
Fabric mills	4	.1	–	–	–	–
Broadwoven fabric mills	4	.1	–	–	–	–
Wood product manufacturing	35	.9	–	–	–	–
Sawmills and wood preservation	17	.4	–	–	–	–
Sawmills and wood preservation	17	.4	–	–	–	–
Sawmills	15	.4	–	–	–	–
Plywood and engineered wood product mfg.	7	.2	–	–	–	–
Plywood and engineered wood product mfg.	7	.2	–	–	–	–
Truss manufacturing	5	.1	–	–	–	–
Other wood product manufacturing	11	.3	–	–	–	–
Millwork	5	.1	–	–	–	–
Wood container and pallet manufacturing	3	.1	–	–	–	–
All other wood product manufacturing	3	.1	–	–	–	–
Paper manufacturing	17	.4	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Pulp, paper, and paperboard mills	9	0.2	–	–	–	–
Paper mills	8	.2	–	–	–	–
Paper, except newsprint, mills	3	.1	–	–	–	–
Newsprint mills	3	.1	–	–	–	–
Converted paper product manufacturing	8	.2	–	–	–	–
Paperboard container manufacturing	5	.1	–	–	–	–
Corrugated and solid fiber box manufacturing	3	.1	–	–	–	–
Printing and related support activities	5	.1	–	–	–	–
Printing and related support activities	5	.1	–	–	–	–
Printing	5	.1	–	–	–	–
Commercial lithographic printing	5	.1	–	–	–	–
Chemical manufacturing	28	.7	–	–	–	–
Basic chemical manufacturing	5	.1	–	–	–	–
Petrochemical manufacturing	3	.1	–	–	–	–
Resin, rubber, and artificial fibers mfg.	4	.1	–	–	–	–
Resin and synthetic rubber manufacturing	4	.1	–	–	–	–
Plastics material and resin manufacturing	4	.1	–	–	–	–
Soap, cleaning compound, and toiletry mfg.	4	.1	–	–	–	–
Soap and cleaning compound manufacturing	3	.1	–	–	–	–
Other chemical product and preparation mfg.	12	.3	–	–	–	–
All other chemical preparation manufacturing	10	.3	–	–	–	–
Other miscellaneous chemical product mfg.	9	.2	–	–	–	–
Plastics and rubber products manufacturing	25	.6	–	–	–	–
Plastics product manufacturing	17	.4	–	–	–	–
Other plastics product manufacturing	8	.2	–	–	–	–
All other plastics product manufacturing	6	.2	–	–	–	–
Rubber product manufacturing	8	.2	–	–	–	–
Other rubber product manufacturing	5	.1	–	–	–	–
Rubber product mfg. for mechanical use	5	.1	–	–	–	–
Nonmetallic mineral product manufacturing	46	1.2	–	–	–	–
Clay product and refractory manufacturing	3	.1	–	–	–	–
Glass and glass product manufacturing	3	.1	–	–	–	–
Glass and glass product manufacturing	3	.1	–	–	–	–
Cement and concrete product manufacturing	29	.7	–	–	–	–
Ready-mix concrete manufacturing	20	.5	–	–	–	–
Concrete pipe, brick, and block manufacturing	4	.1	–	–	–	–
Other concrete product manufacturing	4	.1	–	–	–	–
Other nonmetallic mineral products	11	.3	–	–	–	–
All other nonmetallic mineral products mfg.	11	.3	–	–	–	–
Mineral wool manufacturing	8	.2	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Primary metal manufacturing	30	0.8	–	–	3	0.3
Iron and steel mills and ferroalloy mfg.	9	.2	–	–	–	–
Iron and steel mills and ferroalloy mfg.	9	.2	–	–	–	–
Iron and steel mills	8	.2	–	–	–	–
Steel product mfg. from purchased steel	5	.1	–	–	–	–
Alumina and aluminum production	4	.1	–	–	–	–
Alumina and aluminum production	4	.1	–	–	–	–
Foundries	10	.3	–	–	–	–
Ferrous metal foundries	8	.2	–	–	–	–
Steel foundries, except investment	6	.2	–	–	–	–
Fabricated metal product manufacturing	40	1.0	–	–	3	.3
Forging and stamping	5	.1	–	–	–	–
Forging and stamping	5	.1	–	–	–	–
Metal stamping	3	.1	–	–	–	–
Architectural and structural metals mfg.	15	.4	–	–	–	–
Plate work and fabricated structural products	10	.3	–	–	–	–
Fabricated structural metal manufacturing	5	.1	–	–	–	–
Plate work manufacturing	4	.1	–	–	–	–
Ornamental and architectural metal products	5	.1	–	–	–	–
Machine shops and threaded product mfg.	5	.1	–	–	–	–
Machine shops	5	.1	–	–	–	–
Coating, engraving, and heat treating metals	4	.1	–	–	–	–
Coating, engraving, and heat treating metals	4	.1	–	–	–	–
Machinery manufacturing	24	.6	–	–	–	–
Ag., construction, and mining machinery mfg.	6	.2	–	–	–	–
Industrial machinery manufacturing	3	.1	–	–	–	–
Other industrial machinery manufacturing	3	.1	–	–	–	–
All other industrial machinery manufacturing	3	.1	–	–	–	–
HVAC and commercial refrigeration equipment	3	.1	–	–	–	–
HVAC and commercial refrigeration equipment	3	.1	–	–	–	–
AC, refrigeration, and forced air heating	3	.1	–	–	–	–
Other general purpose machinery manufacturing	9	.2	–	–	–	–
Material handling equipment manufacturing	6	.2	–	–	–	–
Computer and electronic product manufacturing	9	.2	–	–	–	–
Semiconductor and electronic component mfg.	3	.1	–	–	–	–
Semiconductor and electronic component mfg.	3	.1	–	–	–	–
Electronic instrument manufacturing	4	.1	–	–	–	–
Electromedical apparatus manufacturing	4	.1	–	–	–	–
Electrical equipment and appliance mfg.	5	.1	–	–	–	–
Transportation equipment manufacturing	42	1.1	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Motor vehicle manufacturing	4	0.1	–	–	–	–
Automobile and light truck manufacturing	4	.1	–	–	–	–
Automobile manufacturing	3	.1	–	–	–	–
Motor vehicle body and trailer manufacturing	5	.1	–	–	–	–
Motor vehicle body and trailer manufacturing	5	.1	–	–	–	–
Motor vehicle body manufacturing	4	.1	–	–	–	–
Motor vehicle parts manufacturing	14	.4	–	–	–	–
Other motor vehicle parts manufacturing	8	.2	–	–	–	–
All other motor vehicle parts manufacturing	8	.2	–	–	–	–
Aerospace product and parts manufacturing	11	.3	–	–	–	–
Aerospace product and parts manufacturing	11	.3	–	–	–	–
Other aircraft parts and equipment	8	.2	–	–	–	–
Ship and boat building	6	.2	–	–	–	–
Ship and boat building	6	.2	–	–	–	–
Ship building and repairing	5	.1	–	–	–	–
Furniture and related product manufacturing	9	.2	–	–	–	–
Household and institutional furniture mfg.	8	.2	–	–	–	–
Other household and institutional furniture	6	.2	–	–	–	–
Miscellaneous manufacturing	7	.2	–	–	–	–
Other miscellaneous manufacturing	5	.1	–	–	–	–
Service providing	2,116	54.6	486	91.4	526	45.0
Trade, transportation, and utilities	1,131	29.2	37	7.0	244	20.9
Wholesale trade	175	4.5	–	–	16	1.4
Merchant wholesalers, durable goods	91	2.3	–	–	11	.9
Motor vehicle and parts merchant wholesalers	14	.4	–	–	–	–
New motor vehicle parts merchant wholesalers	3	.1	–	–	–	–
Used motor vehicle parts merchant wholesalers	6	.2	–	–	–	–
Furniture and furnishing merchant wholesalers	4	.1	–	–	–	–
Home furnishing merchant wholesalers	3	.1	–	–	–	–
Lumber and const. supply merchant wholesalers	10	.3	–	–	–	–
Masonry material merchant wholesalers	7	.2	–	–	–	–
Commercial equip. merchant wholesalers	11	.3	–	–	–	–
Office equipment merchant wholesalers	5	.1	–	–	–	–
Medical equipment merchant wholesalers	4	.1	–	–	–	–
Metal and mineral merchant wholesalers	3	.1	–	–	–	–
Metal merchant wholesalers	3	.1	–	–	–	–
Electric goods merchant wholesalers	5	.1	–	–	–	–
Elec. equip. and wiring merchant wholesalers	3	.1	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Machinery and supply merchant wholesalers	23	0.6	–	–	3	0.3
Construction equipment merchant wholesalers	4	.1	–	–	–	–
Farm and garden equip. merchant wholesalers	5	.1	–	–	–	–
Industrial machinery merchant wholesalers	10	.3	–	–	–	–
Service estab. equip. merchant wholesalers	3	.1	–	–	–	–
Misc. durable goods merchant wholesalers	20	.5	–	–	4	.3
Recyclable material merchant wholesalers	17	.4	–	–	4	.3
Merchant wholesalers, nondurable goods	77	2.0	–	–	4	.3
Druggists' goods merchant wholesalers	3	.1	–	–	–	–
Druggists' goods merchant wholesalers	3	.1	–	–	–	–
Grocery and related product wholesalers	24	.6	–	–	–	–
General line grocery merchant wholesalers	9	.2	–	–	–	–
Packaged frozen food merchant wholesalers	4	.1	–	–	–	–
Other grocery product merchant wholesalers	7	.2	–	–	–	–
Farm product raw material merch. whls.	15	.4	–	–	–	–
Grain and field bean merchant wholesalers	15	.4	–	–	–	–
Petroleum merchant wholesalers	15	.4	–	–	–	–
Other petroleum merchant wholesalers	13	.3	–	–	–	–
Alcoholic beverage merchant wholesalers	4	.1	–	–	–	–
Beer and ale merchant wholesalers	3	.1	–	–	–	–
Misc. nondurable goods merchant wholesalers	14	.4	–	–	–	–
Farm supplies merchant wholesalers	7	.2	–	–	–	–
Nursery and florist merchant wholesalers	3	.1	–	–	–	–
Electronic markets and agents and brokers	7	.2	–	–	–	–
Electronic markets and agents and brokers	7	.2	–	–	–	–
Wholesale trade agents and brokers	6	.2	–	–	–	–
Retail trade	235	6.1	–	–	109	9.3
Motor vehicle and parts dealers	41	1.1	–	–	26	2.2
Automobile dealers	18	.5	–	–	8	.7
New car dealers	11	.3	–	–	–	–
Used car dealers	3	.1	–	–	–	–
Other motor vehicle dealers	5	.1	–	–	9	.8
Motorcycle, boat, and other vehicle dealers	–	–	–	–	9	.8
Motorcycle dealers	–	–	–	–	4	.3
Boat dealers	–	–	–	–	4	.3
Auto parts, accessories, and tire stores	18	.5	–	–	9	.8

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Automotive parts and accessories stores	13	0.3	–	–	5	0.4
Tire dealers	5	.1	–	–	4	.3
Furniture and home furnishings stores	7	.2	–	–	–	–
Furniture stores	4	.1	–	–	–	–
Furniture stores	4	.1	–	–	–	–
Home furnishings stores	3	.1	–	–	–	–
Electronics and appliance stores	–	–	–	–	4	.3
Electronics and appliance stores	–	–	–	–	4	.3
Building material and garden supply stores	32	.8	–	–	–	–
Building material and supplies dealers	21	.5	–	–	–	–
Home centers	4	.1	–	–	–	–
Hardware stores	4	.1	–	–	–	–
Other building material dealers	12	.3	–	–	–	–
Lawn and garden equipment and supplies stores	11	.3	–	–	–	–
Nursery, garden, and farm supply stores	9	.2	–	–	–	–
Food and beverage stores	59	1.5	–	–	40	3.4
Grocery stores	45	1.2	–	–	35	3.0
Supermarkets and other grocery stores	24	.6	–	–	9	.8
Convenience stores	20	.5	–	–	20	1.7
Specialty food stores	7	.2	–	–	3	.3
Beer, wine, and liquor stores	6	.2	–	–	–	–
Beer, wine, and liquor stores	6	.2	–	–	–	–
Health and personal care stores	7	.2	–	–	–	–
Health and personal care stores	7	.2	–	–	–	–
Pharmacies and drug stores	3	.1	–	–	–	–
Gasoline stations	34	.9	–	–	8	.7
Gasoline stations	34	.9	–	–	8	.7
Gasoline stations with convenience stores	28	.7	–	–	7	.6
Other gasoline stations	4	.1	–	–	–	–
Clothing and clothing accessories stores	8	.2	–	–	8	.7
Clothing stores	5	.1	–	–	3	.3
Jewelry, luggage, and leather goods stores	–	–	–	–	5	.4
Jewelry stores	–	–	–	–	5	.4
Sporting goods, hobby, book and music stores	4	.1	–	–	–	–
Sporting goods and musical instrument stores	3	.1	–	–	–	–
General merchandise stores	10	.3	–	–	–	–
Department stores	7	.2	–	–	–	–
Department stores	7	.2	–	–	–	–
Other general merchandise stores	3	.1	–	–	–	–
Miscellaneous store retailers	15	.4	–	–	10	.9
Florists	3	.1	–	–	–	–
Florists	3	.1	–	–	–	–
Office supplies, stationery, and gift stores	3	.1	–	–	–	–
Gift, novelty, and souvenir stores	3	.1	–	–	–	–
Used merchandise stores	4	.1	–	–	3	.3
Used merchandise stores	4	.1	–	–	3	.3
Other miscellaneous store retailers	5	.1	–	–	5	.4
All other miscellaneous store retailers	4	.1	–	–	4	.3
Tobacco stores	3	.1	–	–	–	–
Store retailers not specified elsewhere	–	–	–	–	4	.3
Nonstore retailers	14	.4	–	–	8	.7

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Direct selling establishments	12	0.3	–	–	8	0.7
Fuel dealers	10	.3	–	–	–	–
Heating oil dealers	4	.1	–	–	–	–
Liquefied petroleum gas, bottled gas, dealers	4	.1	–	–	–	–
Other direct selling establishments	–	–	–	–	7	.6
Transportation and warehousing	689	17.8	27	5.1	119	10.2
Air transportation	47	1.2	–	–	5	.4
Scheduled air transportation	12	.3	–	–	–	–
Scheduled air transportation	12	.3	–	–	–	–
Scheduled passenger air transportation	7	.2	–	–	–	–
Nonscheduled air transportation	35	.9	–	–	5	.4
Nonscheduled air transportation	35	.9	–	–	5	.4
Nonscheduled air passenger chartering	20	.5	–	–	3	.3
Nonscheduled air freight chartering	7	.2	–	–	–	–
Other nonscheduled air transportation	6	.2	–	–	–	–
Rail transportation	18	.5	–	–	–	–
Rail transportation	18	.5	–	–	–	–
Rail transportation	18	.5	–	–	–	–
Line-haul railroads	9	.2	–	–	–	–
Water transportation	24	.6	–	–	–	–
Sea, coastal, and Great Lakes transportation	18	.5	–	–	–	–
Sea, coastal, and Great Lakes transportation	18	.5	–	–	–	–
Deep sea freight transportation	10	.3	–	–	–	–
Deep sea passenger transportation	8	.2	–	–	–	–
Inland water transportation	6	.2	–	–	–	–
Inland water transportation	6	.2	–	–	–	–
Inland water freight transportation	5	.1	–	–	–	–
Truck transportation	447	11.5	–	–	70	6.0
General freight trucking	317	8.2	–	–	46	3.9
General freight trucking, local	38	1.0	–	–	4	.3
General freight trucking, long-distance	252	6.5	–	–	41	3.5
General freight trucking, long-distance TL	179	4.6	–	–	33	2.8
General freight trucking, long-distance LTL	32	.8	–	–	4	.3
Specialized freight trucking	109	2.8	–	–	19	1.6
Used household and office goods moving	10	.3	–	–	–	–
Other specialized trucking, local	53	1.4	–	–	13	1.1
Other specialized trucking, long-distance	44	1.1	–	–	4	.3
Transit and ground passenger transportation	56	1.4	6	1.1	18	1.5
Urban transit systems	3	.1	5	.9	–	–
Urban transit systems	3	.1	5	.9	–	–
Mixed mode transit systems	–	–	3	.6	–	–
Taxi and limousine service	41	1.1	–	–	18	1.5
Taxi service	37	1.0	–	–	18	1.5
Limousine service	3	.1	–	–	–	–
Charter bus industry	5	.1	–	–	–	–
Charter bus industry	5	.1	–	–	–	–
Other ground passenger transportation	6	.2	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Other ground passenger transportation	6	0.2	–	–	–	–
Special needs transportation	5	.1	–	–	–	–
Scenic and sightseeing transportation	7	.2	–	–	–	–
Scenic and sightseeing transportation, other	5	.1	–	–	–	–
Scenic and sightseeing transportation, other	5	.1	–	–	–	–
Support activities for transportation	50	1.3	4	0.8	16	1.4
Support activities for air transportation	6	.2	–	–	–	–
Other support activities for air transport.	6	.2	–	–	–	–
Support activities for water transportation	16	.4	–	–	–	–
Marine cargo handling	6	.2	–	–	–	–
Navigational services to shipping	6	.2	–	–	–	–
Other support activities for water transport.	3	.1	–	–	–	–
Support activities for road transportation	25	.6	–	–	14	1.2
Motor vehicle towing	18	.5	–	–	10	.9
Other support activities for road transport.	7	.2	–	–	4	.3
Postal service	–	–	12	2.3	–	–
Postal service	–	–	12	2.3	–	–
Postal service	–	–	12	2.3	–	–
Couriers and messengers	16	.4	–	–	6	.5
Couriers	11	.3	–	–	6	.5
Couriers	11	.3	–	–	6	.5
Local messengers and local delivery	5	.1	–	–	–	–
Local messengers and local delivery	5	.1	–	–	–	–
Warehousing and storage	21	.5	–	–	–	–
Warehousing and storage	21	.5	–	–	–	–
General warehousing and storage	16	.4	–	–	–	–
Utilities	32	.8	10	1.9	–	–
Utilities	32	.8	10	1.9	–	–
Power generation and supply	22	.6	–	–	–	–
Electric power generation	8	.2	–	–	–	–
Fossil fuel electric power generation	5	.1	–	–	–	–
Electric power transmission and distribution	14	.4	–	–	–	–
Electric power distribution	10	.3	–	–	–	–
Natural gas distribution	3	.1	–	–	–	–
Natural gas distribution	3	.1	–	–	–	–
Water, sewage and other systems	6	.2	7	1.3	–	–
Water supply and irrigation systems	–	–	3	.6	–	–
Sewage treatment facilities	–	–	3	.6	–	–
Information	61	1.6	–	–	3	.3
Information	61	1.6	–	–	3	.3
Publishing industries, except Internet	29	.7	–	–	–	–
Newspaper, book, and directory publishers	27	.7	–	–	–	–
Newspaper publishers	25	.6	–	–	–	–
Motion picture and sound recording industries	5	.1	–	–	–	–
Motion picture and video industries	3	.1	–	–	–	–
Broadcasting, except Internet	3	.1	–	–	–	–
Radio and television broadcasting	3	.1	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Telecommunications	21	0.5	–	–	–	–
Wired telecommunications carriers	13	.3	–	–	–	–
Wired telecommunications carriers	13	.3	–	–	–	–
Cable and other program distribution	4	.1	–	–	–	–
Cable and other program distribution	4	.1	–	–	–	–
Financial activities	112	2.9	–	–	17	1.5
Finance and insurance	40	1.0	–	–	5	.4
Credit intermediation and related activities	23	.6	–	–	4	.3
Depository credit intermediation	11	.3	–	–	–	–
Commercial banking	9	.2	–	–	–	–
Nondepository credit intermediation	10	.3	–	–	3	.3
Other nondepository credit intermediation	9	.2	–	–	3	.3
Real estate credit	5	.1	–	–	–	–
All other nondepository credit intermediation	4	.1	–	–	–	–
Securities, commodity contracts, investments	6	.2	–	–	–	–
Other financial investment activities	4	.1	–	–	–	–
Investment advice	3	.1	–	–	–	–
Insurance carriers and related activities	10	.3	–	–	–	–
Insurance carriers	5	.1	–	–	–	–
Insurance agencies, brokerages, and related	4	.1	–	–	–	–
Insurance agencies and brokerages	3	.1	–	–	–	–
Real estate and rental and leasing	72	1.9	–	–	12	1.0
Real estate	42	1.1	–	–	10	.9
Lessors of real estate	16	.4	–	–	5	.4
Lessors of residential buildings	12	.3	–	–	5	.4
Lessors of nonresidential buildings	3	.1	–	–	–	–
Offices of real estate agents and brokers	10	.3	–	–	3	.3
Offices of real estate agents and brokers	10	.3	–	–	3	.3
Activities related to real estate	15	.4	–	–	–	–
Real estate property managers	15	.4	–	–	–	–
Residential property managers	10	.3	–	–	–	–
Nonresidential property managers	3	.1	–	–	–	–
Rental and leasing services	29	.7	–	–	–	–
Automotive equipment rental and leasing	6	.2	–	–	–	–
Truck, trailer, and RV rental and leasing	4	.1	–	–	–	–
Consumer goods rental	5	.1	–	–	–	–
General rental centers	4	.1	–	–	–	–
General rental centers	4	.1	–	–	–	–
Machinery and equipment rental and leasing	11	.3	–	–	–	–
Heavy machinery rental and leasing	8	.2	–	–	–	–
Other heavy machinery rental and leasing	8	.2	–	–	–	–
Other machinery rental and leasing	3	.1	–	–	–	–
Professional and business services	352	9.1	27	5.1	101	8.6
Professional and technical services	72	1.9	3	.6	25	2.1

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Professional and technical services	72	1.9	3	0.6	25	2.1
Legal services	5	.1	–	–	9	.8
Offices of lawyers	4	.1	–	–	5	.4
Other legal services	–	–	–	–	4	.3
All other legal services	–	–	–	–	4	.3
Accounting and bookkeeping services	4	.1	–	–	4	.3
Accounting and bookkeeping services	4	.1	–	–	4	.3
Offices of certified public accountants	3	.1	–	–	–	–
Architectural and engineering services	21	.5	–	–	5	.4
Architectural services	4	.1	–	–	–	–
Engineering services	9	.2	–	–	–	–
Specialized design services	3	.1	–	–	–	–
Computer systems design and related services	9	.2	–	–	–	–
Computer systems design and related services	9	.2	–	–	–	–
Custom computer programming services	3	.1	–	–	–	–
Management and technical consulting services	12	.3	–	–	–	–
Management consulting services	10	.3	–	–	–	–
Scientific research and development services	8	.2	–	–	–	–
Physical, engineering and biological research	8	.2	–	–	–	–
Advertising and related services	3	.1	–	–	–	–
Display advertising	3	.1	–	–	–	–
Other professional and technical services	7	.2	–	–	–	–
Veterinary services	4	.1	–	–	–	–
Administrative and waste services	280	7.2	24	4.5	76	6.5
Administrative and support services	197	5.1	6	1.1	68	5.8
Facilities support services	4	.1	–	–	–	–
Facilities support services	4	.1	–	–	–	–
Employment services	19	.5	–	–	–	–
Temporary help services	13	.3	–	–	–	–
Professional employer organizations	6	.2	–	–	–	–
Business support services	5	.1	–	–	–	–
Business service centers	3	.1	–	–	–	–
Private mail centers	3	.1	–	–	–	–
Investigation and security services	33	.9	–	–	–	–
Security and armored car services	33	.9	–	–	–	–
Security guards and patrol services	29	.7	–	–	–	–
Armored car services	3	.1	–	–	–	–
Services to buildings and dwellings	127	3.3	4	.8	62	5.3
Janitorial services	16	.4	–	–	4	.3
Landscaping services	100	2.6	–	–	54	4.6
Other services to buildings and dwellings	8	.2	–	–	3	.3
Other support services	5	.1	–	–	–	–
All other support services	5	.1	–	–	–	–
Waste management and remediation services	83	2.1	18	3.4	8	.7
Waste collection	52	1.3	15	2.8	6	.5
Waste collection	52	1.3	15	2.8	6	.5
Solid waste collection	39	1.0	15	2.8	6	.5
Hazardous waste collection	6	.2	–	–	–	–
Other waste collection	4	.1	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Waste treatment and disposal	15	0.4	3	0.6	–	–
Waste treatment and disposal	15	.4	3	.6	–	–
Hazardous waste treatment and disposal	3	.1	–	–	–	–
Solid waste landfill	7	.2	–	–	–	–
Other nonhazardous waste disposal	4	.1	–	–	–	–
Remediation and other waste services	15	.4	–	–	–	–
Remediation services	5	.1	–	–	–	–
Materials recovery facilities	3	.1	–	–	–	–
All other waste management services	7	.2	–	–	–	–
Septic tank and related services	4	.1	–	–	–	–
Educational and health services	122	3.2	67	12.6	21	1.8
Educational services	31	.8	54	10.2	10	.9
Educational services	31	.8	54	10.2	10	.9
Elementary and secondary schools	4	.1	40	7.5	–	–
Elementary and secondary schools	4	.1	40	7.5	–	–
Colleges and universities	3	.1	11	2.1	–	–
Colleges and universities	3	.1	11	2.1	–	–
Technical and trade schools	18	.5	–	–	9	.8
Technical and trade schools	18	.5	–	–	9	.8
Flight training	18	.5	–	–	9	.8
Other schools and instruction	3	.1	–	–	–	–
Sports and recreation instruction	3	.1	–	–	–	–
Health care and social assistance	91	2.3	13	2.4	11	.9
Ambulatory health care services	26	.7	3	.6	10	.9
Offices of physicians	3	.1	–	–	4	.3
Offices of physicians	3	.1	–	–	4	.3
Offices of dentists	–	–	–	–	5	.4
Offices of dentists	–	–	–	–	5	.4
Outpatient care centers	5	.1	–	–	–	–
Other outpatient care centers	4	.1	–	–	–	–
Home health care services	8	.2	–	–	–	–
Home health care services	8	.2	–	–	–	–
Other ambulatory health care services	9	.2	–	–	–	–
Ambulance services	6	.2	–	–	–	–
All other ambulatory health care services	3	.1	–	–	–	–
Hospitals	24	.6	3	.6	–	–
General medical and surgical hospitals	24	.6	–	–	–	–
General medical and surgical hospitals	24	.6	–	–	–	–
Nursing and residential care facilities	20	.5	3	.6	–	–
Nursing care facilities	7	.2	–	–	–	–
Nursing care facilities	7	.2	–	–	–	–
Residential mental health facilities	3	.1	–	–	–	–
Community care facilities for the elderly	7	.2	–	–	–	–
Community care facilities for the elderly	7	.2	–	–	–	–
Continuing care retirement communities	3	.1	–	–	–	–
Homes for the elderly	4	.1	–	–	–	–
Social assistance	19	.5	4	.8	–	–
Individual and family services	7	.2	4	.8	–	–
Other individual and family services	3	.1	–	–	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Vocational rehabilitation services	5	0.1	–	–	–	–
Vocational rehabilitation services	5	.1	–	–	–	–
Child day care services	5	.1	–	–	–	–
Child day care services	5	.1	–	–	–	–
Leisure and hospitality	203	5.2	7	1.3	72	6.2
Arts, entertainment, and recreation	60	1.5	7	1.3	28	2.4
Performing arts and spectator sports	20	.5	4	.8	22	1.9
Performing arts companies	3	.1	–	–	–	–
Spectator sports	12	.3	–	–	13	1.1
Spectator sports	12	.3	–	–	13	1.1
Racetracks	5	.1	–	–	–	–
Other spectator sports	6	.2	–	–	13	1.1
Promoters of performing arts and sports	–	–	3	.6	–	–
Promoters with facilities	–	–	3	.6	–	–
Independent artists, writers, and performers	–	–	–	–	6	.5
Independent artists, writers, and performers	–	–	–	–	6	.5
Museums, historical sites, zoos, and parks	5	.1	–	–	–	–
Museums, historical sites, zoos, and parks	5	.1	–	–	–	–
Amusements, gambling, and recreation	35	.9	–	–	5	.4
Amusement parks and arcades	8	.2	–	–	–	–
Amusement and theme parks	8	.2	–	–	–	–
Other amusement and recreation industries	26	.7	–	–	5	.4
Golf courses and country clubs	8	.2	–	–	–	–
Fitness and recreational sports centers	4	.1	–	–	–	–
All other amusement and recreation industries	9	.2	–	–	4	.3
Accommodation and food services	143	3.7	–	–	44	3.8
Accommodation	32	.8	–	–	8	.7
Traveler accommodation	24	.6	–	–	4	.3
Hotels and motels, except casino hotels	21	.5	–	–	3	.3
Casino hotels	3	.1	–	–	–	–
RV parks and recreational camps	7	.2	–	–	4	.3
RV parks and recreational camps	7	.2	–	–	4	.3
RV parks and campgrounds	–	–	–	–	4	.3
Recreational and vacation camps	5	.1	–	–	–	–
Food services and drinking places	110	2.8	–	–	36	3.1
Full-service restaurants	30	.8	–	–	9	.8
Full-service restaurants	30	.8	–	–	9	.8
Limited-service eating places	45	1.2	–	–	16	1.4
Limited-service eating places	45	1.2	–	–	16	1.4
Limited-service restaurants	37	1.0	–	–	14	1.2
Snack and nonalcoholic beverage bars	3	.1	–	–	–	–
Special food services	7	.2	–	–	5	.4
Food service contractors	6	.2	–	–	–	–
Mobile food services	–	–	–	–	5	.4
Drinking places, alcoholic beverages	27	.7	–	–	6	.5
Drinking places, alcoholic beverages	27	.7	–	–	6	.5
Other services, except public administration	128	3.3	–	–	66	5.6

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Other services, except public administration	128	3.3	–	–	66	5.6
Repair and maintenance	68	1.8	–	–	53	4.5
Automotive repair and maintenance	49	1.3	–	–	38	3.2
Automotive mechanical and electrical repair	27	.7	–	–	30	2.6
General automotive repair	21	.5	–	–	24	2.1
Other automotive mechanical and elec. repair	6	.2	–	–	–	–
Automotive body, interior, and glass repair	11	.3	–	–	4	.3
Automotive body and interior repair	10	.3	–	–	4	.3
Other automotive repair and maintenance	8	.2	–	–	–	–
Car washes	3	.1	–	–	–	–
All other automotive repair and maintenance	4	.1	–	–	–	–
Electronic equipment repair and maintenance	–	–	–	–	3	.3
Electronic equipment repair and maintenance	–	–	–	–	3	.3
Commercial machinery repair and maintenance	14	.4	–	–	5	.4
Commercial machinery repair and maintenance	14	.4	–	–	5	.4
Household goods repair and maintenance	–	–	–	–	6	.5
Home and garden equip. and appliance repair	–	–	–	–	4	.3
Personal and laundry services	33	.9	–	–	9	.8
Personal care services	7	.2	–	–	3	.3
Hair, nail, and skin care services	6	.2	–	–	–	–
Death care services	7	.2	–	–	–	–
Funeral homes and funeral services	3	.1	–	–	–	–
Cemeteries and crematories	4	.1	–	–	–	–
Drycleaning and laundry services	12	.3	–	–	4	.3
Coin-operated laundries and drycleaners	5	.1	–	–	–	–
Drycleaning and laundry services	4	.1	–	–	3	.3
Linen and uniform supply	3	.1	–	–	–	–
Other personal services	7	.2	–	–	–	–
Pet care, except veterinary, services	3	.1	–	–	–	–
Membership associations and organizations	26	.7	–	–	4	.3
Religious organizations	16	.4	–	–	–	–
Religious organizations	16	.4	–	–	–	–
Civic and social organizations	6	.2	–	–	–	–
Civic and social organizations	6	.2	–	–	–	–
Professional and similar organizations	4	.1	–	–	–	–
Labor unions and similar labor organizations	3	.1	–	–	–	–
Public administration	–	–	344	64.7	–	–
Public administration	–	–	344	64.7	–	–
Executive, legislative and general government	–	–	19	3.6	–	–
Executive, legislative and general government	–	–	19	3.6	–	–
Executive offices	–	–	3	.6	–	–

See footnotes at end of table.

TABLE A-7. **Fatal occupational injuries to private sector wage and salary workers, government workers, and self-employed workers by industry, 2003 — Continued**

Industry[1]	Fatalities					
	Private sector wage and salary workers[2]		Government workers[3]		Self-employed workers[4]	
	Number	Percent	Number	Percent	Number	Percent
Public finance activities	–	–	4	0.8	–	–
Tribal governments	–	–	4	.8	–	–
Other general government support	–	–	5	.9	–	–
Justice, public order, and safety activities	–	–	218	41.0	–	–
Justice, public order, and safety activities	–	–	218	41.0	–	–
Police protection	–	–	151	28.4	–	–
Legal counsel and prosecution	–	–	5	.9	–	–
Correctional institutions	–	–	20	3.8	–	–
Fire protection	–	–	39	7.3	–	–
Administration of human resource programs	–	–	4	.8	–	–
Administration of human resource programs	–	–	4	.8	–	–
Administration of environmental programs	–	–	18	3.4	–	–
Administration of environmental programs	–	–	18	3.4	–	–
Air, water, and waste program administration	–	–	7	1.3	–	–
Administration of conservation programs	–	–	11	2.1	–	–
Administration of economic programs	–	–	11	2.1	–	–
Administration of economic programs	–	–	11	2.1	–	–
Transportation program administration	–	–	7	1.3	–	–
Space research and technology	–	–	7	1.3	–	–
Space research and technology	–	–	7	1.3	–	–
Space research and technology	–	–	7	1.3	–	–
National security and international affairs	–	–	63	11.8	–	–
National security and international affairs	–	–	63	11.8	–	–
National security	–	–	61	11.5	–	–

[1] Classified according to the North American Industry Classification System, 2002.
[2] May include volunteers and other workers receiving compensation.
[3] Includes fatalities to workers employed by governmental organizations regardless of industry.
[4] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[5] Includes fatalities at all establishments categorized as Mining (Sector 21) in the North American Industry Classification System, 2002, including establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 9 fatalities for which there was insufficient information to determine a specific industry classification, though a distinction between private and government was made for each.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003**

Source	Fatalities	Occupation[1] (Percent)				
		Management, business and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations
Total	5,575	12.0	4.7	12.6	6.2	2.0
Primary source[2]						
Vehicles	2,418	13.6	5.7	10.1	4.0	1.9
Air Vehicle	213	9.4	13.1	2.3	2.3	–
Aircraft--powered fixed wing	127	13.4	13.4	3.1	3.9	–
Jet	11	–	–	–	–	–
Propeller-driven aircraft	96	10.4	14.6	4.2	–	–
Aircraft--powered rotary wing	64	–	17.2	–	–	–
Aircraft--nonpowered	6	–	–	–	–	–
Highway vehicle, motorized	1,740	6.4	5.8	12.6	5.0	2.2
Automobile	361	10.8	12.2	26.6	12.2	4.2
Bus	17	–	–	–	–	–
Truck	1,157	5.0	2.2	6.3	2.5	1.4
Delivery truck	59	–	–	5.1	–	–
Dump truck	91	6.6	–	7.7	–	–
Pickup truck	232	10.8	6.0	13.8	3.4	1.3
Semitrailer, tractor trailer, trailer truck	515	1.7	.6	1.4	.6	–
Van--passenger or light delivery	130	6.2	11.5	20.0	9.2	4.6
Highway vehicle, nonmotorized	5	–	–	–	–	–
Animal or human powered vehicle	5	–	–	–	–	–
Offroad vehicle, nonindustrial	26	30.8	11.5	19.2	–	–
Golf cart, powered	3	–	–	100.0	–	–
Plant and industrial powered vehicles, tractors	335	57.0	–	2.4	–	–
Forklift	89	5.6	–	–	–	–
Tractor	240	77.5	–	2.9	–	–
Rail vehicle	25	–	–	16.0	–	–
Water vehicle	69	–	–	5.8	–	–
Barge	9	–	–	–	–	–
Motorboat	4	–	–	–	–	–
Ships--other than sail powered	8	–	–	–	–	–
Tugboat, commercial fishing boat	39	–	–	–	–	–
Structures and surfaces	802	8.7	3.6	12.8	2.6	1.5
Floors, walkways, ground surfaces	676	8.0	3.8	14.1	2.7	1.6
Floors	223	8.1	4.5	12.1	4.5	3.1
Ground	262	5.0	3.1	16.8	1.1	–
Sidewalks, paths, outdoor walkways	30	–	13.3	20.0	–	–
Street, road	19	21.1	–	15.8	–	–
Surfaces below ground level, n.e.c.	26	–	–	–	–	–
Ditches, channels, trenches, excavations	24	–	–	–	–	–
Parking lots	29	10.3	–	17.2	–	–
Other structural elements	59	15.3	–	5.1	–	–
Doors	8	–	–	–	–	–
Roof	12	–	–	–	–	–
Walls	16	–	–	–	–	–
Structures	58	8.6	–	8.6	–	–
Buildings--office, plant, residential	22	13.6	–	18.2	–	–
Scaffolds, staging	12	–	–	–	–	–
Towers, poles	14	–	–	–	–	–
Machinery	434	14.3	1.4	6.5	.7	–
Agricultural and garden machinery	60	50.0	–	26.7	–	–
Harvesting and threshing machinery	13	76.9	–	–	–	–
Combines	8	100.0	–	–	–	–
Mowing machinery	25	28.0	–	60.0	–	–
Lawn mowers--riding	10	–	–	80.0	–	–
Mowers, tractor	15	40.0	–	46.7	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Occupation[1] (Percent)					
	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military specific occupations
Total	5.5	18.6	7.1	5.1	25.0	1.1
Primary source[2]						
Vehicles	5.2	9.3	4.1	1.6	43.0	1.6
Air Vehicle	–	2.8	1.4	–	53.1	13.1
Aircraft--powered fixed wing	–	–	–	–	59.8	2.4
Jet	–	–	–	–	63.6	–
Propeller-driven aircraft	–	–	–	–	61.5	–
Aircraft--powered rotary wing	–	7.8	–	–	42.2	23.4
Aircraft--nonpowered	–	–	–	–	–	50.0
Highway vehicle, motorized	2.2	10.5	4.7	1.6	48.5	.5
Automobile	–	8.9	6.1	1.7	16.6	.8
Bus	–	–	17.6	–	70.6	–
Truck	2.9	11.3	3.5	1.6	63.1	.3
Delivery truck	–	–	–	–	84.7	–
Dump truck	–	18.7	3.3	–	61.5	–
Pickup truck	5.6	28.4	5.6	3.9	20.7	–
Semitrailer, tractor trailer, trailer truck	1.2	1.9	1.9	.8	89.5	–
Van--passenger or light delivery	4.6	10.8	6.9	–	23.8	–
Highway vehicle, nonmotorized	–	–	–	–	–	–
Animal or human powered vehicle	–	–	–	–	–	–
Offroad vehicle, nonindustrial	30.8	–	–	–	–	–
Golf cart, powered	–	–	–	–	–	–
Plant and industrial powered vehicles, tractors	11.3	8.4	2.7	2.4	14.6	–
Forklift	5.6	23.6	6.7	9.0	46.1	–
Tractor	13.8	2.5	–	–	2.1	–
Rail vehicle	–	–	–	–	60.0	–
Water vehicle	58.0	5.8	–	–	18.8	–
Barge	–	–	–	–	55.6	–
Motorboat	–	–	–	–	–	–
Ships--other than sail powered	–	–	–	–	75.0	–
Tugboat, commercial fishing boat	92.3	–	–	–	–	–
Structures and surfaces	1.0	48.3	9.2	3.2	8.7	–
Floors, walkways, ground surfaces	.9	47.9	9.0	3.0	9.0	–
Floors	1.3	43.5	9.4	5.8	7.6	–
Ground	1.1	53.1	10.3	1.5	7.6	–
Sidewalks, paths, outdoor walkways	–	46.7	10.0	–	–	–
Street, road	–	52.6	–	–	–	–
Surfaces below ground level, n.e.c.	–	76.9	–	–	–	–
Ditches, channels, trenches, excavations	–	79.2	–	–	–	–
Parking lots	–	20.7	–	–	27.6	–
Other structural elements	–	49.2	–	6.8	8.5	–
Doors	–	–	–	–	37.5	–
Roof	–	66.7	–	–	–	–
Walls	–	81.2	–	–	–	–
Structures	–	55.2	17.2	–	–	–
Buildings--office, plant, residential	–	45.5	–	–	–	–
Scaffolds, staging	–	75.0	–	–	–	–
Towers, poles	–	50.0	50.0	–	–	–
Machinery	6.5	31.8	13.8	12.4	12.2	–
Agricultural and garden machinery	11.7	–	–	–	–	–
Harvesting and threshing machinery	–	–	–	–	–	–
Combines	–	–	–	–	–	–
Mowing machinery	–	–	–	–	–	–
Lawn mowers--riding	–	–	–	–	–	–
Mowers, tractor	–	–	–	–	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Fatalities	Occupation[1] (Percent)				
		Management, business and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations
Primary source[2] - continued						
Plowing, planting, and fertilizing machinery	5	–	–	–	–	–
Construction, logging, and mining machinery	175	10.9	–	4.6	–	–
Excavating machinery	64	10.9	–	–	–	–
Backhoes	32	12.5	–	–	–	–
Bulldozers	17	–	–	–	–	–
Loaders	53	20.8	–	5.7	–	–
Bucket loaders	8	37.5	–	–	–	–
Front end loaders	32	12.5	–	–	–	–
Logging and wood processing machinery--specialized	18	–	–	–	–	–
Skidder--cable and grapple	5	–	–	–	–	–
Mining and drilling machinery	10	–	–	–	–	–
Drilling machines, drilling augers	9	–	–	–	–	–
Road grading and surfacing mahinery	15	–	–	–	–	–
Graders, levellers, planers, scrapers	9	–	–	–	–	–
Steam rollers, road pavers	3	–	–	–	–	–
Heating, cooling, and cleaning machinery and appliances	19	–	–	–	–	–
Cooling and humidifying machinery and appliances	6	–	–	–	–	–
Material handling (cranes, conveyers, jacks)	100	8.0	–	–	–	–
Conveyers--powered	20	25.0	–	–	–	–
Cranes	34	–	–	–	–	–
Cranes--mobile, truck, and rail mounted	14	–	–	–	–	–
Overhead hoists	3	–	–	–	–	–
Elevators	28	–	–	–	–	–
Bucket or basket hoist--truck mounted	10	–	–	–	–	–
Metal, woodworking, and special material machinery	36	–	–	–	–	–
Extruding, injecting, forming, molding machinery	8	–	–	–	–	–
Special process machinery	22	–	–	–	–	–
Food and beverage processing machinery--specialized	5	–	–	–	–	–
Miscellaneous machinery	20	–	–	–	–	–
Street sweeping and cleaning machinery	5	–	–	–	–	–
Parts and materials	356	6.7	2.0	6.5	3.4	–
Building materials--solid elements	113	10.6	–	–	–	–
Bricks, blocks, structural stone	17	–	–	–	–	–
Pipes, ducts, tubing	39	10.3	–	–	–	–
Structural metal materials	34	14.7	–	–	–	–
Bars, rods, reinforcing bar (rebar)	4	–	–	–	–	–
Wood, lumber	16	–	–	–	–	–
Other building materials--solid elements	7	–	–	–	–	–
Fasteners, connectors, ropes, ties	62	9.7	4.8	16.1	9.7	–
Ropes, ties	54	11.1	5.6	18.5	9.3	–
Rope, twine, string	29	–	–	27.6	10.3	–
Machine, tool, and electrical parts	129	3.9	3.1	6.2	–	–
Electric parts	105	2.9	–	7.6	–	–
Electrical wiring	43	7.0	–	–	–	–
Power lines, transformers, converters	45	–	–	17.8	–	–
Switchboards, switches, fuses	4	–	–	–	–	–
Metal materials--nonstructural	10	–	–	–	–	–
Vehicle and mobile equipment parts	35	–	–	8.6	–	–
Tires, inner tubes, wheels	18	–	–	–	–	–
Wheels, tire rims	9	–	–	–	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Occupation[1] (Percent)					
	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military specific occupations
Primary source[2] - continued						
Plowing, planting, and fertilizing machinery	–	–	–	–	–	–
Construction, logging, and mining machinery	9.7	49.1	8.6	1.7	14.3	–
Excavating machinery	–	65.6	–	–	14.1	–
Backhoes	–	75.0	–	–	–	–
Bulldozers	–	52.9	–	–	17.6	–
Loaders	7.5	34.0	13.2	–	18.9	–
Bucket loaders	–	–	–	–	–	–
Front end loaders	9.4	31.2	15.6	–	25.0	–
Logging and wood processing machinery--specialized	61.1	–	–	16.7	–	–
Skidder--cable and grapple	80.0	–	–	–	–	–
Mining and drilling machinery	–	70.0	–	–	–	–
Drilling machines, drilling augers	–	66.7	–	–	–	–
Road grading and surfacing mahinery	–	73.3	–	–	–	–
Graders, levellers, planers, scrapers	–	66.7	–	–	–	–
Steam rollers, road pavers	–	100.0	–	–	–	–
Heating, cooling, and cleaning machinery and appliances	–	15.8	42.1	26.3	–	–
Cooling and humidifying machinery and appliances	–	–	66.7	–	–	–
Material handling (cranes, conveyers, jacks)	3.0	37.0	20.0	11.0	19.0	–
Conveyers--powered	15.0	15.0	15.0	25.0	–	–
Cranes	–	50.0	–	–	38.2	–
Cranes--mobile, truck, and rail mounted	–	42.9	–	–	57.1	–
Overhead hoists	–	–	–	–	–	–
Elevators	–	39.3	32.1	–	10.7	–
Bucket or basket hoist--truck mounted	–	50.0	–	–	–	–
Metal, woodworking, and special material machinery	–	13.9	13.9	55.6	–	–
Extruding, injecting, forming, molding machinery	–	–	–	62.5	–	–
Special process machinery	–	13.6	13.6	50.0	18.2	–
Food and beverage processing machinery--specialized	–	–	–	–	–	–
Miscellaneous machinery	–	15.0	35.0	–	15.0	–
Street sweeping and cleaning machinery	–	–	–	–	–	–
Parts and materials	2.0	35.4	19.1	11.0	12.6	–
Building materials--solid elements	–	44.2	7.1	13.3	18.6	–
Bricks, blocks, structural stone	–	52.9	–	–	29.4	–
Pipes, ducts, tubing	–	38.5	15.4	7.7	20.5	–
Structural metal materials	–	41.2	–	26.5	8.8	–
Bars, rods, reinforcing bar (rebar)	–	–	–	–	–	–
Wood, lumber	–	43.8	–	–	31.2	–
Other building materials--solid elements	–	71.4	–	–	–	–
Fasteners, connectors, ropes, ties	–	17.7	12.9	9.7	16.1	–
Ropes, ties	–	13.0	13.0	9.3	16.7	–
Rope, twine, string	–	13.8	10.3	–	17.2	–
Machine, tool, and electrical parts	–	42.6	28.7	5.4	6.2	–
Electric parts	–	46.7	31.4	3.8	–	–
Electrical wiring	–	58.1	18.6	–	–	–
Power lines, transformers, converters	–	31.1	48.9	–	–	–
Switchboards, switches, fuses	–	–	–	–	–	–
Metal materials--nonstructural	–	–	–	50.0	–	–
Vehicle and mobile equipment parts	8.6	14.3	34.3	11.4	14.3	–
Tires, inner tubes, wheels	16.7	–	50.0	–	16.7	–
Wheels, tire rims	–	–	44.4	–	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Fatalities	Occupation[1] (Percent)				
		Management, business and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations
Primary source[2] - continued						
Trailers	11	–	–	27.3	–	–
Persons, plants, animals, and minerals	306	15.7	3.6	23.5	4.6	1.6
Animals and animal products	49	38.8	14.3	20.4	–	–
Insects, arachnids	5	–	–	–	–	–
Mammals, except humans	42	45.2	16.7	23.8	–	–
Cattle	24	75.0	–	–	–	–
Horses	11	–	27.3	45.5	–	–
Food products--fresh or processed	29	41.4	–	–	10.3	–
Nonmetallic minerals, except fuel	32	–	–	–	–	–
Dirt, earth	21	–	–	–	–	–
Rocks, crushed stone	5	–	–	–	–	–
Person--other than injured or ill worker	36	8.3	8.3	27.8	30.6	8.3
Co-worker, former co-worker of injured worker	8	–	–	–	–	–
Robber	11	–	–	27.3	45.5	–
Plants, trees, vegetation--not processed	148	8.1	–	31.1	–	–
Trees, logs	142	4.9	–	32.4	–	–
Chemicals and chemical products	152	6.6	16.4	10.5	2.6	–
Halogens and halogen compounds	3	–	–	–	–	–
Chemical products--general	71	9.9	25.4	16.9	–	–
Drugs, alcohol, medicines	58	10.3	27.6	19.0	–	–
Coal, natural gas, petroleum fuels and products	8	–	–	–	–	–
Petroleum fuels, distillates, products, n.e.c.	4	–	–	–	–	–
Other chemicals	61	4.9	11.5	4.9	–	–
Oxygen and oxygen compounds, n.e.c.	36	–	–	8.3	–	–
Carbon monoxide	32	–	–	9.4	–	–
Sewer gas, mine gas, methane	6	–	–	–	–	–
Sulfur and sulfur compounds	4	–	–	–	–	–
Tools, instruments, and equipment	116	10.3	3.4	20.7	16.4	8.6
Handtools--nonpowered	74	13.5	–	23.0	20.3	13.5
Cutting handtools	59	10.2	–	25.4	23.7	16.9
Knives	49	10.2	–	24.5	26.5	16.3
Handtools--powered	11	–	–	–	–	–
Cutting handtools	5	–	–	–	–	–
Ladders	14	–	–	–	–	–
Ladders--movable	14	–	–	–	–	–
Extension ladders	10	–	–	–	–	–
Containers	77	11.7	–	–	–	–
Containers--nonpressurized	41	17.1	–	–	–	–
Bags, sacks, totes	4	–	–	–	–	–
Boxes, crates, cartons	7	–	–	–	–	–
Tanks, bins, vats	22	18.2	–	–	–	–
Containers--pressurized	14	–	–	–	–	–
Variable restraint	17	–	–	–	–	–
Bundles, bales	11	–	–	–	–	–
Reels, rolls	6	–	–	–	–	–
Other	914	11.1	4.5	21.0	19.3	4.0
Furniture and fixtures	18	–	–	–	–	–
Other fixtures	12	–	–	–	–	–
Ammunition	617	12.8	3.9	23.2	27.2	5.0
Bullets	605	12.9	4.0	23.3	27.6	5.1
Atmospheric and environmental conditions	175	9.1	6.9	15.4	2.9	2.3

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Occupation[1] (Percent)					
	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military specific occupations
Primary source[2] - continued						
Trailers	–	–	–	–	–	–
Persons, plants, animals, and minerals	30.1	11.1	1.3	2.6	5.6	–
Animals and animal products	16.3	6.1	–	–	–	–
Insects, arachnids	60.0	–	–	–	–	–
Mammals, except humans	9.5	–	–	–	–	–
Cattle	–	–	–	–	–	–
Horses	–	–	–	–	–	–
Food products--fresh or processed	13.8	–	–	–	13.8	–
Nonmetallic minerals, except fuel	–	75.0	–	–	12.5	–
Dirt, earth	–	90.5	–	–	–	–
Rocks, crushed stone	–	–	–	–	–	–
Person--other than injured or ill worker	–	–	–	–	–	–
Co-worker, former co-worker of injured worker	–	–	–	–	–	–
Robber	–	–	–	–	–	–
Plants, trees, vegetation--not processed	52.7	2.7	–	2.0	2.0	–
Trees, logs	54.9	2.8	–	2.1	–	–
Chemicals and chemical products	3.9	20.4	11.2	11.2	15.8	–
Halogens and halogen compounds	–	–	–	–	–	–
Chemical products--general	–	15.5	–	8.5	18.3	–
Drugs, alcohol, medicines	–	15.5	–	6.9	15.5	–
Coal, natural gas, petroleum fuels and products	–	37.5	37.5	–	–	–
Petroleum fuels, distillates, products, n.e.c.	–	–	–	–	–	–
Other chemicals	6.6	24.6	21.3	13.1	9.8	–
Oxygen and oxygen compounds, n.e.c.	–	30.6	22.2	8.3	–	–
Carbon monoxide	–	31.2	25.0	9.4	–	–
Sewer gas, mine gas, methane	–	–	–	–	–	–
Sulfur and sulfur compounds	–	–	–	–	–	–
Tools, instruments, and equipment	4.3	13.8	6.9	6.0	8.6	–
Handtools--nonpowered	–	4.1	6.8	4.1	10.8	–
Cutting handtools	–	–	–	–	13.6	–
Knives	–	–	–	–	14.3	–
Handtools--powered	–	–	–	–	–	–
Cutting handtools	–	–	–	–	–	–
Ladders	–	78.6	–	–	–	–
Ladders--movable	–	78.6	–	–	–	–
Extension ladders	–	100.0	–	–	–	–
Containers	–	19.5	11.7	23.4	26.0	–
Containers--nonpressurized	–	17.1	9.8	24.4	26.8	–
Bags, sacks, totes	–	–	–	–	–	–
Boxes, crates, cartons	–	–	–	–	–	–
Tanks, bins, vats	–	27.3	13.6	18.2	22.7	–
Containers--pressurized	–	28.6	35.7	21.4	–	–
Variable restraint	–	23.5	–	23.5	41.2	–
Bundles, bales	–	36.4	–	–	27.3	–
Reels, rolls	–	–	–	–	66.7	–
Other	3.4	7.3	6.1	8.2	12.4	1.8
Furniture and fixtures	–	27.8	33.3	–	–	–
Other fixtures	–	41.7	50.0	–	–	–
Ammunition	1.3	2.6	4.7	5.2	12.0	1.9
Bullets	1.3	2.5	4.8	5.0	11.6	1.8
Atmospheric and environmental conditions	8.0	15.4	8.6	18.3	12.0	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Fatalities	Occupation[1] (Percent)				
		Management, business and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations
Primary source[2] - continued						
Fire, flame, smoke	127	10.2	7.1	16.5	3.9	2.4
Fire, flame	93	7.5	–	11.8	–	–
Smoke, fire gases	30	20.0	23.3	30.0	10.0	–
Temperature extreme	30	–	–	10.0	–	–
Steam, vapors, liquids	71	5.6	–	22.5	–	–
Scrap, waste, debris	6	–	–	–	–	–
Secondary source[3]						
Vehicles	924	8.2	6.1	10.3	5.7	2.5
Air Vehicle	11	–	–	–	–	–
Aircraft--powered fixed wing	6	–	–	–	–	–
Highway vehicle, motorized	811	7.8	6.7	11.6	6.2	2.7
Automobile	150	8.0	6.0	18.0	6.0	4.7
Bus	7	–	–	–	–	–
Truck	583	7.7	6.2	10.5	6.5	2.1
Delivery truck	13	–	–	–	–	–
Dump truck	36	8.3	–	–	–	–
Pickup truck	118	11.0	8.5	15.3	11.0	–
Semitrailer, tractor trailer, trailer truck	301	7.0	6.0	6.6	3.3	2.3
Van--passenger or light delivery	31	12.9	–	9.7	9.7	–
Plant and industrial powered vehicles, tractors	44	18.2	–	–	–	–
Forklift	34	11.8	–	–	–	–
Tractor	8	50.0	–	–	–	–
Rail vehicle	40	–	–	–	–	–
Water vehicle	8	–	–	–	–	–
Ships--other than sail powered	3	–	–	–	–	–
Structures and surfaces	798	6.8	4.6	6.9	1.8	1.1
Floors, walkways, ground surfaces	222	9.0	5.9	9.9	1.8	–
Floors	36	–	–	–	–	–
Ground	117	10.3	6.0	9.4	–	–
Street, road	10	–	–	–	–	–
Surfaces below ground level, n.e.c.	18	16.7	–	–	–	–
Ditches, channels, trenches, excavations	17	17.6	–	–	–	–
Other structural elements	202	6.4	3.5	6.9	–	–
Doors	4	–	–	–	–	–
Fences, fence panels	16	–	–	31.2	–	–
Roof	99	5.1	–	–	–	–
Walls	30	–	–	–	–	–
Structures	370	5.4	4.6	5.1	2.2	1.4
Bridges, dams, locks	42	7.1	–	–	7.1	–
Buildings--office, plant, residential	35	14.3	11.4	–	–	–
Mines, caves, tunnels	16	–	–	–	–	–
Scaffolds, staging	77	7.8	–	3.9	–	–
Towers, poles	74	–	5.4	9.5	–	–
Other structures	121	4.1	2.5	5.0	2.5	–
Guardrails, road dividers	98	–	–	3.1	3.1	–
Machinery	209	12.9	–	5.3	–	–
Agricultural and garden machinery	18	66.7	–	–	–	–
Mowing machinery	11	72.7	–	–	–	–
Construction, logging, and mining machinery	48	10.4	–	–	–	–
Excavating machinery	21	–	–	–	–	–
Backhoes	12	–	–	–	–	–
Bulldozers	4	–	–	–	–	–
Loaders	13	–	–	–	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Occupation[1] (Percent)					
	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military specific occupations
Primary source[2] - continued						
Fire, flame, smoke	3.1	11.0	11.0	22.0	12.6	–
Fire, flame	–	15.1	12.9	30.1	15.1	–
Smoke, fire gases	–	–	–	–	–	–
Temperature extreme	23.3	30.0	–	–	13.3	–
Steam, vapors, liquids	12.7	23.9	7.0	–	14.1	–
Scrap, waste, debris	–	–	–	50.0	–	–
Secondary source[3]						
Vehicles	3.1	10.0	5.5	1.8	46.0	0.8
Air Vehicle	–	–	–	–	36.4	45.5
Aircraft--powered fixed wing	–	–	–	–	66.7	–
Highway vehicle, motorized	2.7	10.0	5.5	1.6	45.0	–
Automobile	–	12.0	4.7	2.0	37.3	–
Bus	–	–	–	–	42.9	–
Truck	2.7	9.9	5.1	1.5	47.7	–
Delivery truck	–	–	–	–	53.8	–
Dump truck	–	22.2	8.3	–	47.2	–
Pickup truck	4.2	5.1	6.8	–	36.4	–
Semitrailer, tractor trailer, trailer truck	2.3	11.0	3.0	1.3	57.1	–
Van--passenger or light delivery	–	9.7	12.9	–	38.7	–
Plant and industrial powered vehicles, tractors	6.8	13.6	13.6	–	36.4	–
Forklift	–	17.6	14.7	–	44.1	–
Tractor	–	–	–	–	–	–
Rail vehicle	–	7.5	–	–	80.0	–
Water vehicle	–	–	–	–	75.0	–
Ships--other than sail powered	–	–	–	–	100.0	–
Structures and surfaces	2.1	34.2	6.4	2.5	31.3	2.3
Floors, walkways, ground surfaces	4.1	20.3	5.0	1.4	34.2	7.7
Floors	–	55.6	11.1	–	11.1	–
Ground	4.3	7.7	2.6	–	44.4	13.7
Street, road	–	30.0	–	–	40.0	–
Surfaces below ground level, n.e.c.	–	38.9	–	–	22.2	–
Ditches, channels, trenches, excavations	–	41.2	–	–	23.5	–
Other structural elements	3.0	56.9	7.4	4.0	9.9	–
Doors	–	–	–	–	–	–
Fences, fence panels	–	–	–	–	43.8	–
Roof	–	81.8	5.1	–	–	–
Walls	–	30.0	–	10.0	30.0	–
Structures	–	30.3	6.8	2.2	41.4	–
Bridges, dams, locks	–	14.3	–	–	61.9	–
Buildings--office, plant, residential	–	40.0	–	–	22.9	–
Mines, caves, tunnels	–	43.8	–	–	25.0	–
Scaffolds, staging	–	77.9	–	3.9	–	–
Towers, poles	–	21.6	23.0	4.1	28.4	–
Other structures	–	7.4	–	–	76.0	–
Guardrails, road dividers	–	6.1	–	–	84.7	–
Machinery	6.7	33.0	19.1	11.5	9.6	–
Agricultural and garden machinery	16.7	–	–	–	–	–
Mowing machinery	–	–	–	–	–	–
Construction, logging, and mining machinery	16.7	52.1	–	6.2	6.2	–
Excavating machinery	–	81.0	–	–	–	–
Backhoes	–	75.0	–	–	–	–
Bulldozers	–	75.0	–	–	–	–
Loaders	–	46.2	–	–	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Fatalities	Occupation[1] (Percent)				
		Management, business and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations
Secondary source[3] - continued						
Front end loaders	7	–	–	–	–	–
Logging and wood processing machinery--specialized	9	–	–	–	–	–
Heating, cooling, and cleaning machinery and appliances	8	–	–	–	–	–
Heating and cooking machinery and appliances	5	–	–	–	–	–
Material handling (cranes, conveyers, jacks)	107	7.5	–	5.6	–	–
Conveyers--powered	6	66.7	–	–	–	–
Cranes	25	–	–	–	–	–
Cranes--mobile, truck, and rail mounted	5	–	–	–	–	–
Elevators	38	–	–	13.2	–	–
Bucket or basket hoist--truck mounted	19	–	–	21.1	–	–
Manlifts	14	–	–	–	–	–
Jacks	29	10.3	–	–	–	–
Metal, woodworking, and special material machinery	11	–	–	–	–	–
Special process machinery	10	–	–	–	–	–
Miscellaneous machinery	7	–	–	–	–	–
Parts and materials	250	8.0	2.4	10.8	–	–
Building materials--solid elements	58	–	–	12.1	–	–
Bricks, blocks, structural stone	5	–	–	60.0	–	–
Pipes, ducts, tubing	16	–	–	–	–	–
Structural metal materials	23	–	–	–	–	–
Wood, lumber	8	–	–	–	–	–
Fasteners, connectors, ropes, ties	23	13.0	–	34.8	–	–
Ropes, ties	20	15.0	–	40.0	–	–
Machine, tool, and electrical parts	128	6.2	3.9	7.8	–	–
Electric parts	120	6.7	4.2	7.5	–	–
Electrical wiring	14	21.4	–	–	–	–
Power lines, transformers, converters	92	4.3	4.3	9.8	–	–
Vehicle and mobile equipment parts	28	25.0	–	–	–	–
Tires, inner tubes, wheels	9	–	–	–	–	–
Trailers	16	37.5	–	–	–	–
Persons, plants, animals, and minerals	859	11.8	3.1	25.5	20.6	4.1
Animals and animal products	20	40.0	–	30.0	–	–
Mammals, except humans	19	42.1	–	31.6	–	–
Cattle	7	71.4	–	–	–	–
Horses	9	–	–	55.6	–	–
Nonmetallic minerals, except fuel	15	–	–	20.0	–	–
Boulders	3	–	–	–	–	–
Dirt, earth	6	–	–	–	–	–
Rocks, crushed stone	3	–	–	–	–	–
Person--other than injured or ill worker	601	10.8	2.2	25.6	28.5	5.8
Co-worker, former co-worker of injured worker	73	17.8	6.8	9.6	12.3	6.8
Relative of injured worker	18	27.8	–	–	–	27.8
Robber	242	7.9	–	20.7	45.5	3.3
Plants, trees, vegetation--not processed	217	11.5	6.0	25.3	2.3	–
Trees, logs	214	11.2	6.1	25.2	2.3	–
Chemicals and chemical products	95	5.3	4.2	11.6	–	–
Chemical products--general	27	–	–	33.3	–	–
Solvents, degreasers, n.e.c.	5	–	–	–	–	–
Coal, natural gas, petroleum fuels and products	36	8.3	–	–	–	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Occupation[1] (Percent)					
	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military specific occupations
Secondary source[3] - continued						
Front end loaders	–	57.1	–	–	–	–
Logging and wood processing machinery--specialized	66.7	–	–	–	–	–
Heating, cooling, and cleaning machinery and appliances	–	–	37.5	–	–	–
Heating and cooking machinery and appliances	–	–	–	–	–	–
Material handling (cranes, conveyers, jacks)	–	35.5	28.0	6.5	14.0	–
Conveyers--powered	–	–	–	–	–	–
Cranes	–	48.0	16.0	12.0	20.0	–
Cranes--mobile, truck, and rail mounted	–	100.0	–	–	–	–
Elevators	–	47.4	21.1	–	7.9	–
Bucket or basket hoist--truck mounted	–	42.1	21.1	–	–	–
Manlifts	–	57.1	21.4	–	–	–
Jacks	–	10.3	62.1	–	–	–
Metal, woodworking, and special material machinery	–	–	–	72.7	–	–
Special process machinery	–	–	30.0	–	–	–
Miscellaneous machinery	–	–	–	42.9	–	–
Parts and materials	3.6	39.2	12.4	3.2	15.6	3.2
Building materials--solid elements	–	50.0	10.3	6.9	13.8	–
Bricks, blocks, structural stone	–	–	–	–	–	–
Pipes, ducts, tubing	–	50.0	–	–	18.8	–
Structural metal materials	–	52.2	17.4	–	–	–
Wood, lumber	–	37.5	–	–	37.5	–
Fasteners, connectors, ropes, ties	–	13.0	–	–	17.4	–
Ropes, ties	–	–	–	–	15.0	–
Machine, tool, and electrical parts	3.9	46.9	14.8	–	13.3	–
Electric parts	–	49.2	14.2	–	14.2	–
Electrical wiring	–	64.3	–	–	–	–
Power lines, transformers, converters	–	46.7	16.3	–	14.1	–
Vehicle and mobile equipment parts	–	14.3	14.3	–	28.6	–
Tires, inner tubes, wheels	–	–	–	–	44.4	–
Trailers	–	–	–	–	25.0	–
Persons, plants, animals, and minerals	4.8	3.3	3.8	3.4	19.1	.5
Animals and animal products	–	–	–	–	20.0	–
Mammals, except humans	–	–	–	–	15.8	–
Cattle	–	–	–	–	–	–
Horses	–	–	–	–	–	–
Nonmetallic minerals, except fuel	–	–	–	–	33.3	–
Boulders	–	–	–	–	–	–
Dirt, earth	–	–	–	–	–	–
Rocks, crushed stone	–	–	–	–	–	–
Person--other than injured or ill worker	1.3	2.7	4.5	4.5	13.8	–
Co-worker, former co-worker of injured worker	–	8.2	5.5	17.8	12.3	–
Relative of injured worker	–	–	–	–	–	–
Robber	–	–	–	3.3	18.2	–
Plants, trees, vegetation--not processed	15.2	4.1	2.3	–	32.7	–
Trees, logs	15.0	4.2	2.3	–	33.2	–
Chemicals and chemical products	–	15.8	12.6	27.4	17.9	–
Chemical products--general	–	29.6	–	18.5	–	–
Solvents, degreasers, n.e.c.	–	–	–	–	–	–
Coal, natural gas, petroleum fuels and products	–	11.1	22.2	16.7	27.8	–

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Fatalities	Occupation[1] (Percent)				
		Management, business and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations
Secondary source[3] - continued						
Petroleum fuels, distillates, products, n.e.c.	26	11.5	–	–	–	–
Gasoline, diesel fuel, jet fuel	14	–	–	–	–	–
Other chemicals	23	–	–	–	–	–
Tools, instruments, and equipment	231	11.3	4.8	16.9	6.1	1.7
Handtools--nonpowered	5	–	–	–	–	–
Handtools--powered	39	7.7	–	23.1	–	–
Cutting handtools	17	–	–	47.1	–	–
Welding and heating handtools	15	–	–	–	–	–
Other handtools--powered	3	–	–	–	–	–
Ladders	116	8.6	2.6	14.7	3.4	–
Ladders--fixed	7	–	–	–	–	–
Ladders--movable	77	7.8	–	14.3	3.9	–
Extension ladders	27	–	–	18.5	–	–
Step ladders	15	–	–	–	–	–
Straight ladders	3	–	–	–	–	–
Containers	95	20.0	3.2	4.2	4.2	–
Containers--nonpressurized	54	29.6	–	–	–	–
Tanks, bins, vats	47	34.0	–	–	–	–
Containers--pressurized	29	–	–	13.8	–	–
Pressure lines, except hoses	8	–	–	–	–	–
Variable restraint	7	42.9	–	–	–	–
Bundles, bales	4	75.0	–	–	–	–
Other	236	9.7	8.5	8.9	4.2	3.8
Furniture and fixtures	23	–	–	–	13.0	17.4
Furniture	8	–	–	–	–	–
Atmospheric and environmental conditions	59	13.6	8.5	8.5	8.5	6.8
Fire, flame, smoke	5	–	–	–	–	–
Fire, flame	5	–	–	–	–	–
Steam, vapors, liquids	112	8.0	12.5	8.0	–	–
Scrap, waste, debris	3	–	–	–	–	–
Not Reported	1,878	21.8	11.8	5.3	33.0	26.9

See footnotes at end of table.

TABLE A-8. **Fatal occupational injuries by primary and secondary source and major occupational group, 2003 — Continued**

Source	Occupation[1] (Percent)					
	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military specific occupations
Secondary source[3] - continued						
Petroleum fuels, distillates, products, n.e.c.	–	–	19.2	15.4	30.8	–
Gasoline, diesel fuel, jet fuel	–	–	–	–	50.0	–
Other chemicals	–	–	–	47.8	26.1	–
Tools, instruments, and equipment	3.0	30.3	10.8	6.1	5.6	3.5
Handtools--nonpowered	–	60.0	–	–	–	–
Handtools--powered	12.8	15.4	15.4	23.1	–	–
Cutting handtools	29.4	–	–	–	–	–
Welding and heating handtools	–	–	26.7	46.7	–	–
Other handtools--powered	–	–	–	–	–	–
Ladders	–	47.4	13.8	–	6.9	–
Ladders--fixed	–	–	–	–	–	–
Ladders--movable	–	51.9	14.3	–	3.9	–
Extension ladders	–	51.9	11.1	–	–	–
Step ladders	–	53.3	20.0	–	–	–
Straight ladders	–	–	–	–	–	–
Containers	9.5	15.8	7.4	12.6	23.2	–
Containers--nonpressurized	13.0	7.4	7.4	9.3	27.8	–
Tanks, bins, vats	14.9	–	6.4	10.6	27.7	–
Containers--pressurized	–	31.0	10.3	20.7	13.8	–
Pressure lines, except hoses	–	62.5	–	–	–	–
Variable restraint	–	–	–	–	–	–
Bundles, bales	–	–	–	–	–	–
Other	16.5	14.4	2.1	7.6	21.6	–
Furniture and fixtures	–	13.0	–	–	34.8	–
Furniture	–	–	–	–	–	–
Atmospheric and environmental conditions	5.1	13.6	–	–	28.8	–
Fire, flame, smoke	–	–	–	–	60.0	–
Fire, flame	–	–	–	–	60.0	–
Steam, vapors, liquids	28.6	15.2	–	4.5	19.6	–
Scrap, waste, debris	–	–	–	–	–	–
Not Reported	0.9	–	–	–	–	–

[1] Based on the 2000 Standard Occupational Classification System

[2] The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.

[3] The secondary source of injury, if any, identifies the object, substance, or person that generated the source of injury or that contributed to the event or exposure. For vehicle collisions, the deceased's vehicle is the primary source and the other object (truck, road divider, etc.) is the secondary source. For most homicides, the "bullet" is the primary source and the "perpetrator" is the secondary source.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. n.e.c. means "not elsewhere classified". There were 7 fatalities for which there was insufficient information to determine a specific occupation classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

TABLE A-9. **Fatal occupational injuries by detailed event or exposure, 1995-2003**

Event or exposure[1]	1995 (number)	1996 (number)	1997 (number)	1998 (number)	1999 (number)	2000 (number)	2001 (number)	2002 (number)	2003	
									Number	Percent
Total	6,275	6,202	6,238	6,055	6,054	5,920	5,915	5,534	5,575	100.0
Transportation incident	2,587	2,601	2,605	2,645	2,618	2,573	2,524	2,385	2,364	42.4
Highway	1,346	1,346	1,393	1,442	1,496	1,365	1,409	1,373	1,353	24.3
Collision between vehicles, mobile equipment	642	667	640	707	714	696	727	636	648	11.6
Re-entrant collision	9	19	8	14	29	16	14	9	6	.1
Moving in same direction	127	96	103	120	129	136	142	155	135	2.4
Moving in opposite directions, oncoming	246	220	230	272	270	243	257	202	269	4.8
Moving in intersection	99	153	142	143	161	154	138	146	124	2.2
Moving and standing vehicle, mobile equipment--in roadway	31	35	24	39	39	50	43	46	37	.7
Moving and standing vehicle, mobile equipment--side of road	14	16	21	14	19	21	29	19	26	.5
Vehicle struck stationary object or equipment in roadway	19	29	22	18	33	24	29	33	17	.3
Noncollision	352	352	387	375	390	356	339	373	321	5.8
Jack-knifed or overturned--no collision	261	266	298	302	322	304	273	312	252	4.5
Ran off highway--no collision	57	43	49	32	41	30	35	25	35	.6
Struck by shifting load	–	3	3	9	–	–	5	–	–	–
Sudden start or stop, n.e.c.	11	12	4	4	8	5	5	9	3	.1
Nonhighway (farm, industrial premises)	387	374	377	388	352	399	326	323	347	6.2
Collision between vehicles or mobile equipment	4	11	15	9	13	15	10	12	11	.2
Vehicle, mobile equipment struck stationary object	23	37	24	30	29	50	35	32	39	.7
Noncollision accident	355	316	328	332	305	326	272	271	289	5.2
Fall from moving vehicle, mobile equipment	36	20	17	19	21	23	36	20	18	.3
Fell from and struck by vehicle, mobile equipment	71	59	71	70	58	72	57	58	54	1.0
Overturned	209	206	216	217	206	213	158	164	186	3.3
Loss of control	6	6	4	4	–	–	8	6	–	–
Struck by shifting load	–	–	5	3	5	–	3	–	–	–
Sudden start or stop, n.e.c.	5	–	–	–	–	–	–	3	4	.1
Aircraft	283	324	261	224	228	280	247	194	211	3.8
Worker struck by vehicle, mobile equipment	388	353	367	413	377	370	383	356	337	6.0
Worker struck by vehicle, mobile equipment in roadway	123	125	129	131	137	122	157	126	122	2.2
Worker struck by vehicle, mobile equipment on side of road	60	51	56	66	65	70	50	60	68	1.2
Worker struck by vehicle, mobile equipment in parking lot or non-road area	175	162	160	199	165	169	169	164	145	2.6
Water vehicle	87	119	109	112	102	84	90	71	69	1.2
Collision	–	4	8	9	5	–	12	8	–	–
Explosion, fire, n.e.c.	–	9	4	–	–	–	4	–	9	.2
Fall from ship, boat, n.e.c.	32	43	37	49	32	38	25	27	25	.4
Fall on ship, boat	6	7	7	6	8	4	3	8	–	–
Sinking, capsized water vehicle	29	40	37	37	42	25	39	19	20	.4
Railway	82	74	93	60	56	71	62	64	43	.8
Collision between railway vehicles	10	10	7	–	8	6	6	3	–	–
Collision between railway vehicle and other vehicle	60	52	72	48	42	54	52	47	35	.6
Fell from and struck by railway vehicle	4	–	6	5	–	3	–	5	3	.1
Assaults and violent acts	1,280	1,165	1,111	962	909	930	908	840	902	16.2
Homicides	1,036	927	860	714	651	677	643	609	632	11.3
Hitting, kicking, beating	46	50	48	48	48	37	36	34	50	.9
Shooting	762	761	708	574	509	533	509	469	487	8.7
Stabbing	67	80	73	61	62	66	58	58	58	1.0
Assaults and violent acts by person(s), n.e.c.	153	29	26	24	26	38	38	38	34	.6
Self-inflicted injury	221	204	216	221	218	221	230	199	218	3.9
Assaults by animals	20	32	33	24	39	31	35	32	48	.9
Contact with objects and equipment	916	1,010	1,035	944	1,030	1,006	962	872	913	16.4
Struck by object	547	582	579	520	585	571	553	505	531	9.5
Struck by falling object	341	403	384	319	358	357	343	302	324	5.8

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by detailed event or exposure, 1995-2003 — Continued**

Event or exposure[1]	1995 (number)	1996 (number)	1997 (number)	1998 (number)	1999 (number)	2000 (number)	2001 (number)	2002 (number)	2003	
									Number	Percent
Struck by flying object	63	58	54	59	55	61	60	38	57	1.0
Struck by discharged object or substance	23	24	22	19	19	13	24	12	22	.4
Struck by swinging or slipping object	44	36	43	30	39	31	39	42	43	.8
Struck by rolling, sliding objects on floor or ground level	60	55	68	75	97	92	72	93	76	1.4
Caught in or compressed by equipment or objects	255	285	320	266	302	294	266	231	238	4.3
Caught in running equipment or machinery	131	146	189	129	163	157	144	110	123	2.2
Compressed or pinched by rolling, sliding, or shifting objects	56	66	55	62	51	46	59	50	45	.8
Caught in or crushed in collapsing materials	99	131	118	140	129	123	122	116	126	2.3
Excavation or trenching cave-in	33	55	35	46	44	40	36	34	48	.9
Other cave-in	5	13	9	15	18	6	10	7	–	–
Caught in or crushed in collapsing structure	32	35	38	42	28	45	44	52	44	.8
Falls	651	691	716	706	721	734	810	719	696	12.5
Fall to lower level	578	610	653	625	634	659	700	638	604	10.8
Fall down stairs or steps	16	15	13	12	23	22	24	11	18	.3
Fall from floor, dock, or ground level	33	27	40	32	43	46	43	38	41	.7
Fall from ladder	97	97	116	111	96	110	123	126	114	2.0
Fall from piled or stacked material	–	4	5	3	4	–	5	–	–	–
Fall from roof	143	149	154	157	153	150	159	143	128	2.3
Fall from scaffold, staging	82	88	87	98	92	85	91	88	85	1.5
Fall from building girders or other structural steel	34	38	48	44	49	44	41	41	29	.5
Fall from nonmoving vehicle	34	55	53	48	47	61	58	60	69	1.2
Jump to lower level	3	13	4	–	3	3	5	–	5	.1
Fall on same level	53	52	44	51	70	56	84	64	71	1.3
Exposure to harmful substances or environments	609	533	554	576	533	481	499	539	486	8.7
Contact with electric current	348	281	298	334	280	256	285	289	246	4.4
Contact with electric current of machine, tool, appliance, or light fixture	55	46	41	51	51	42	47	42	51	.9
Contact with wiring, transformers, or other electrical components	94	70	71	84	76	67	78	90	69	1.2
Contact with overhead power lines	139	116	138	153	125	128	124	122	107	1.9
Contact with underground, buried power lines	5	5	5	9	4	–	4	4	–	–
Struck by lightning	17	18	22	21	13	7	15	16	8	.1
Contact with temperature extremes	56	33	40	48	51	29	35	60	42	.8
Exposure to environmental heat	35	18	22	34	35	21	24	40	29	.5
Exposure to environmental cold	8	–	–	–	–	–	–	5	3	.1
Contact with hot objects or substances	13	13	17	11	15	7	9	14	10	.2
Exposure to caustic, noxious, or allergenic substances	107	123	123	105	108	100	96	99	122	2.2
Inhalation of substance	62	76	59	48	55	48	49	49	65	1.2
Inhalation in enclosed, restricted, or confined space[2]	35	56	25	27	23	22	25	20	27	.5
Inhalation in open or nonconfined space	21	12	19	14	23	20	18	23	32	.6
Contact with skin or other exposed tissue	3	5	3	4	–	5	7	–	3	.1
Injections, stings, venomous bites	9	14	23	12	16	10	9	10	14	.3
Needle sticks	–	3	7	–	6	–	–	–	5	.1
Bee, wasp, hornet sting	4	5	10	6	5	6	3	6	4	.1
Ingestion of substance	18	20	26	20	21	24	16	23	33	.6
Oxygen deficiency	97	95	90	87	92	94	83	90	73	1.3
Drowning, submersion	77	70	72	75	75	75	59	60	52	.9
Depletion of oxygen in other enclosed, restricted, or confined space	10	12	5	7	–	5	13	10	7	.1
Fire or explosion	207	185	196	206	216	177	188	165	198	3.6
Fire--unintended or uncontrolled	97	98	87	117	115	100	89	88	123	2.2
Fire in residence, building, or other structure	57	64	39	69	74	56	52	48	79	1.4
Forest, brush, or other outdoor fire	9	10	8	14	6	6	7	9	9	.2

See footnotes at end of table.

TABLE A-9. **Fatal occupational injuries by detailed event or exposure, 1995-2003 — Continued**

Event or exposure[1]	1995 (number)	1996 (number)	1997 (number)	1998 (number)	1999 (number)	2000 (number)	2001 (number)	2002 (number)	2003	
									Number	Percent
Ignition of clothing from controlled heat source	3	–	7	3	6	–	6	–	–	–
Explosion	107	85	109	89	99	76	99	77	75	1.3
Explosion, unspecified	7	4	6	4	5	–	5	–	–	–
Explosion of pressure vessel or piping	42	45	37	39	38	30	47	33	37	.7
Other events or exposures[3]	13	6	12	8	15	6	9	–	4	.1

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[2] Includes fatalities that occurred in structures that do not meet the definition of permit required confined spaces as defined by Occupational Safety and Health Administration regulations.
[3] Includes the category "Bodily reaction and exertion."
NOTE: Totals for 2003 are revised and final. Totals for 2001 exclude fatalities resulting from the September 11 terrorist attacks. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. n.e.c. means "not elsewhere classified."
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of Fatal Occupational Injuries

Appendix B. State and Area Data

Together, three States--California, Texas, and Florida--contributed 23 percent of all fatal work injuries in 2003. Overall, 24 States recorded a decrease from 2002 to 2003 in their annual workplace fatality counts, while 25 States (including the District of Columbia) recorded an increase. Two States reported no change in number of fatalities. Overall, fatal occupational injuries increased by less than one percent. Of particular note is an 18-percent rise in workplace fatalities in Texas from 417 in 2002 to 491 in 2003. For the sixth year in a row, California has recorded a decline in occupational fatalities. In addition, Alaska reported its lowest number of fatal injuries since the census began in 1992, down from a high of 91 in 1992 to 28 in 2003.

When evaluating State fatality profiles, consideration should be given to each State's industry mix, age of the population, and other characteristics of the workforce, especially if proportionately more of the State's workers are employed in relatively hazardous industries such as agriculture, mining, and construction.

TABLE B-1. **Fatal occupational injuries by State of incident, 1992-2003**

State of incident	Year											
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	6,217	6,331	6,632	6,275	6,202	6,238	6,055	6,054	5,920	5,915	5,534	5,575
Alabama	145	138	153	150	155	139	135	123	103	138	102	124
Alaska	91	66	60	78	63	51	43	42	53	64	42	28
Arizona	67	55	79	86	77	61	74	70	118	87	101	80
Arkansas	82	71	85	92	88	102	86	76	106	68	80	87
California	644	657	639	646	641	651	626	602	553	515	478	459
Colorado	103	99	120	112	90	120	77	106	117	139	123	102
Connecticut	42	31	35	32	35	32	57	38	55	41	39	36
Delaware	11	13	15	12	18	17	11	14	13	10	11	9
District of Columbia	8	25	21	16	19	23	13	14	13	11	8	19
Florida	329	345	358	391	333	366	384	345	329	368	354	347
Georgia	204	230	249	237	213	242	202	229	195	237	197	199
Hawaii	28	26	21	24	27	19	12	32	20	41	24	21
Idaho	45	43	50	53	62	56	51	43	35	45	39	43
Illinois	250	252	247	250	262	240	216	208	206	231	190	200
Indiana	148	136	195	156	143	190	155	171	159	152	136	132
Iowa	110	88	74	54	70	80	68	80	71	62	57	76
Kansas	82	99	106	95	85	93	98	87	85	94	89	78
Kentucky	117	143	158	140	141	143	117	120	132	105	146	145
Louisiana	153	171	187	139	134	137	159	141	143	117	103	95
Maine	19	20	22	18	23	19	26	32	26	23	30	23
Maryland	103	82	80	86	82	82	78	82	84	64	102	92
Massachusetts	67	85	74	66	62	69	44	83	70	54	46	78
Michigan	143	160	180	149	155	174	179	182	156	175	152	152
Minnesota	103	113	82	84	92	72	88	72	68	76	81	72
Mississippi	123	121	126	128	103	104	113	128	125	111	94	102
Missouri	140	131	155	125	140	123	145	165	148	145	175	154
Montana	65	38	50	34	50	56	58	49	42	58	51	39
Nebraska	43	78	83	54	56	46	56	66	59	57	83	51
Nevada	49	38	41	51	52	55	60	58	51	40	47	52
New Hampshire	10	13	14	12	11	23	23	14	13	9	19	19
New Jersey	138	145	114	118	100	101	103	104	115	129	129	104
New Mexico	35	55	54	58	60	50	48	39	35	59	63	46
New York (including New York City)	314	345	364	302	317	264	243	241	233	220	240	227
New York City	187	191	184	144	148	109	94	120	111	100	100	94
North Carolina	169	214	226	187	191	210	228	222	234	203	169	182
North Dakota	20	30	21	28	23	35	24	22	34	25	25	26
Ohio	203	190	209	186	201	201	186	222	207	209	202	206
Oklahoma	78	86	97	200	87	104	75	99	82	115	92	100
Oregon	88	84	80	73	85	84	72	69	52	44	63	75
Pennsylvania	242	241	354	233	282	259	235	221	199	225	188	208
Rhode Island	17	16	12	11	6	11	12	11	7	17	8	18
South Carolina	100	87	83	115	109	131	111	139	115	91	107	115
South Dakota	28	28	31	26	32	23	28	46	35	35	36	28
Tennessee	145	154	170	179	152	168	150	154	160	136	140	137
Texas	536	529	497	475	514	459	523	468	572	536	417	491
Utah	59	66	66	51	64	66	67	54	61	65	52	54
Vermont	11	7	8	16	7	9	16	14	15	6	11	14
Virginia	175	135	164	132	153	166	177	154	148	146	142	155
Washington	97	112	118	109	128	112	113	88	75	102	86	83
West Virginia	77	66	61	56	66	53	57	57	46	63	40	51
Wisconsin	135	138	109	117	108	114	97	105	107	110	91	103
Wyoming	26	36	35	32	28	29	33	32	36	40	33	37

NOTE: Totals for all years are revised and final.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-2. **Fatal occupational injuries by State and major industry sectors, 2003**

State of injury	Total fatalities (number)[1]	Private industry[2] (percent)										Government[3] (percent)
		Natural resources and mining	Construction	Manufacturing	Trade, transportation, and utilities	Information	Financial activities	Professional and business services	Educational and health services	Leisure and hospitality	Other services, except public administration	
Total	5,575	15.2	20.3	7.5	24.7	1.1	2.3	8.1	2.6	4.9	3.5	9.5
Alabama	124	12.9	26.6	5.6	25.8	–	–	7.3	–	2.4	3.2	12.9
Alaska	28	39.3	–	–	28.6	–	–	–	–	14.3	–	–
Arizona	80	5.0	25.0	6.2	31.2	–	–	5.0	6.2	–	–	13.8
Arkansas	87	18.4	13.8	13.8	28.7	–	–	11.5	–	–	–	8.0
California	459	8.1	22.2	6.3	25.1	1.7	2.0	12.4	2.8	4.6	4.1	10.2
Colorado	102	15.7	22.5	–	17.6	–	–	5.9	3.9	12.7	10.8	7.8
Connecticut	36	–	16.7	–	27.8	–	–	11.1	–	–	–	13.9
Delaware	9	–	–	–	–	–	–	–	–	–	–	–
District of Columbia	19	–	26.3	–	–	–	–	15.8	–	–	–	21.1
Florida	347	10.7	26.8	6.9	21.6	–	2.9	12.1	2.3	5.2	4.0	6.6
Georgia	199	6.5	22.1	9.5	28.1	–	4.5	8.0	3.0	4.5	4.0	8.5
Hawaii	21	–	19.0	–	33.3	–	–	14.3	14.3	–	–	–
Idaho	43	25.6	16.3	–	30.2	–	–	–	–	–	–	16.3
Illinois	200	9.0	23.5	6.5	22.0	–	2.5	8.0	3.5	7.5	5.0	12.0
Indiana	132	18.2	11.4	11.4	28.0	–	4.5	8.3	–	5.3	4.5	5.3
Iowa	76	43.4	6.6	13.2	19.7	–	–	5.3	–	–	–	6.6
Kansas	78	24.4	16.7	3.8	23.1	–	–	6.4	6.4	6.4	3.8	7.7
Kentucky	145	28.3	17.9	7.6	20.0	–	2.1	2.1	–	2.8	2.8	14.5
Louisiana	95	18.9	22.1	12.6	22.1	–	–	6.3	–	3.2	–	10.5
Maine	23	26.1	13.0	13.0	21.7	–	–	–	–	–	–	–
Maryland	92	9.8	30.4	4.3	26.1	–	–	6.5	3.3	3.3	5.4	7.6
Massachusetts	78	14.1	32.1	9.0	19.2	–	–	9.0	5.1	–	–	3.8
Michigan	152	22.4	19.7	9.2	21.7	–	–	3.9	2.0	7.9	3.3	7.9
Minnesota	72	26.4	13.9	6.9	30.6	–	–	9.7	4.2	–	–	4.2
Mississippi	102	11.8	10.8	13.7	28.4	3.9	–	5.9	4.9	3.9	2.9	9.8
Missouri	154	22.1	16.9	9.7	24.7	3.2	1.9	5.8	3.2	1.9	3.9	6.5
Montana	39	28.2	7.7	–	20.5	–	–	–	7.7	–	–	17.9
Nebraska	51	29.4	7.8	–	37.3	–	–	9.8	–	–	–	13.7
Nevada	52	–	19.2	7.7	26.9	–	5.8	5.8	5.8	13.5	–	7.7
New Hampshire	19	–	26.3	–	31.6	–	–	–	–	–	–	–
New Jersey	104	3.8	27.9	5.8	26.9	–	2.9	5.8	–	8.7	4.8	13.5
New Mexico	46	21.7	15.2	–	32.6	–	–	8.7	–	–	–	–
New York (including N.Y.C.)	227	7.5	20.3	4.8	25.1	–	3.5	9.3	2.2	7.5	3.5	15.9
New York City	94	–	24.5	4.3	25.5	–	6.4	8.5	–	10.6	7.4	11.7
North Carolina	182	12.6	24.2	14.3	19.8	–	2.7	9.9	1.6	3.8	1.6	8.8
North Dakota	26	42.3	15.4	–	23.1	–	–	–	–	–	–	–
Ohio	206	16.5	19.4	15.5	15.0	–	1.5	9.7	3.4	5.3	3.9	9.2
Oklahoma	100	25.0	14.0	–	41.0	–	–	3.0	–	–	–	8.0
Oregon	75	33.3	12.0	8.0	21.3	–	4.0	5.3	–	–	4.0	5.3
Pennsylvania	208	13.0	18.8	8.7	23.1	1.9	2.4	8.7	4.8	6.7	4.3	7.7
Rhode Island	18	–	33.3	–	27.8	–	–	–	–	27.8	–	–
South Carolina	115	3.5	21.7	8.7	33.0	–	2.6	11.3	–	4.3	3.5	8.7
South Dakota	28	46.4	–	–	14.3	–	–	–	–	–	–	–
Tennessee	137	23.4	15.3	3.6	29.2	2.9	–	8.0	–	–	2.9	10.9
Texas	491	11.8	21.6	7.3	28.9	1.0	3.1	7.3	1.6	5.9	2.4	9.0
Utah	54	7.4	24.1	–	24.1	–	–	13.0	7.4	–	–	13.0
Vermont	14	35.7	–	–	–	–	–	–	–	–	–	21.4
Virginia	155	9.7	26.5	5.8	21.3	–	3.9	12.9	–	1.9	2.6	13.5
Washington	83	18.1	21.7	9.6	19.3	–	–	8.4	–	–	–	13.3
West Virginia	51	33.3	17.6	–	15.7	–	–	–	–	5.9	–	11.8
Wisconsin	103	29.1	15.5	7.8	22.3	–	–	4.9	–	2.9	3.9	7.8
Wyoming	37	29.7	13.5	–	27.0	–	–	8.1	–	–	–	–

[1] Includes 1 fatality that occurred within the territorial boundaries of the United States, but a State of incident could not be determined.
[2] Classified according to the North American Industry Classification System, 2002.
[3] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 9 fatalities for which there was insufficient information to determine a specific industry classification, though a distinction between private and government was made for each.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-3. **Fatal occupational injuries by State and major occupational group, 2003**

State of injury	Total fatalities (number)[1]	Occupation[2] (percent)										
		Management, business, and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	Military occupations
Total	5,575	12.0	4.7	12.6	6.2	2.0	5.5	18.6	7.1	5.1	25.0	1.1
Alabama	124	5.6	3.2	8.1	6.5	–	5.6	18.5	9.7	4.0	37.1	–
Alaska	28	–	–	14.3	–	–	32.1	–	–	–	28.6	–
Arizona	80	11.2	–	12.5	6.2	–	–	16.2	7.5	3.8	32.5	3.8
Arkansas	87	3.4	3.4	10.3	6.9	–	14.9	13.8	5.7	5.7	33.3	–
California	459	4.6	7.2	14.8	4.8	3.5	5.7	19.4	11.1	4.4	22.0	2.6
Colorado	102	11.8	9.8	12.7	6.9	–	6.9	20.6	10.8	–	16.7	–
Connecticut	36	–	–	11.1	–	–	–	13.9	13.9	–	38.9	–
Delaware	9	–	–	–	–	–	–	44.4	–	–	–	–
District of Columbia	19	–	21.1	26.3	–	–	–	26.3	–	–	–	–
Florida	347	6.9	4.6	15.6	6.1	1.4	8.1	21.9	8.4	4.3	22.5	–
Georgia	199	5.5	6.5	12.1	8.5	–	4.5	17.1	7.5	7.5	28.6	–
Hawaii	21	–	–	28.6	–	–	–	23.8	–	–	28.6	–
Idaho	43	20.9	–	14.0	–	–	11.6	11.6	–	–	23.3	–
Illinois	200	15.5	7.0	15.0	6.5	–	–	21.5	4.0	4.5	24.5	–
Indiana	132	22.7	4.5	7.6	6.1	4.5	–	12.1	7.6	6.1	27.3	–
Iowa	76	39.5	–	5.3	–	–	5.3	6.6	10.5	6.6	19.7	–
Kansas	78	21.8	7.7	10.3	9.0	3.8	–	21.8	9.0	–	14.1	–
Kentucky	145	14.5	3.4	8.3	4.1	–	8.3	22.8	6.9	7.6	22.8	–
Louisiana	95	–	–	15.8	4.2	–	5.3	23.2	7.4	15.8	21.1	–
Maine	23	–	–	–	–	–	17.4	21.7	–	–	30.4	–
Maryland	92	8.7	–	16.3	6.5	–	5.4	25.0	6.5	5.4	25.0	–
Massachusetts	78	–	6.4	7.7	–	3.8	14.1	28.2	9.0	–	23.1	–
Michigan	152	22.4	4.6	7.9	5.9	2.0	2.0	19.7	4.6	10.5	20.4	–
Minnesota	72	29.2	–	5.6	4.2	–	–	12.5	–	5.6	31.9	–
Mississippi	102	11.8	9.8	12.7	5.9	–	6.9	9.8	3.9	9.8	28.4	–
Missouri	154	24.0	5.8	9.7	2.6	–	2.6	11.0	5.8	4.5	31.8	–
Montana	39	25.6	10.3	10.3	–	–	15.4	–	–	–	20.5	–
Nebraska	51	29.4	–	7.8	13.7	–	–	–	–	–	31.4	–
Nevada	52	–	–	19.2	–	–	–	17.3	17.3	–	26.9	–
New Hampshire	19	–	–	–	–	–	–	21.1	15.8	–	31.6	–
New Jersey	104	6.7	2.9	13.5	4.8	2.9	–	28.8	6.7	3.8	27.9	–
New Mexico	46	13.0	–	13.0	–	–	–	15.2	–	–	39.1	–
New York (including N.Y.C.)	227	7.9	4.0	15.9	10.6	3.1	2.6	17.2	6.2	3.5	24.2	4.8
New York City	94	4.3	–	23.4	16.0	4.3	–	22.3	5.3	–	20.2	–
North Carolina	182	13.7	2.2	15.9	8.8	–	5.5	19.8	4.4	7.1	18.7	2.2
North Dakota	26	34.6	–	–	–	–	–	11.5	15.4	–	23.1	–
Ohio	206	15.5	6.3	18.4	3.9	2.9	2.9	17.0	6.8	9.2	17.0	–
Oklahoma	100	16.0	–	6.0	9.0	–	4.0	19.0	5.0	3.0	34.0	–
Oregon	75	5.3	9.3	18.7	–	–	25.3	10.7	–	8.0	18.7	–
Pennsylvania	208	18.3	2.9	10.6	5.8	4.8	2.4	13.5	9.6	5.8	26.0	–
Rhode Island	18	–	–	–	–	–	–	27.8	–	–	16.7	–
South Carolina	115	5.2	2.6	17.4	7.8	3.5	4.3	20.9	7.0	4.3	26.1	–
South Dakota	28	50.0	–	10.7	–	–	–	–	–	–	10.7	–
Tennessee	137	16.1	2.9	11.7	11.7	2.2	8.8	14.6	4.4	–	26.3	–
Texas	491	4.7	3.1	11.2	10.6	2.0	3.1	21.6	6.1	5.1	30.1	2.4
Utah	54	9.3	9.3	7.4	–	–	5.6	24.1	9.3	–	29.6	–
Vermont	14	21.4	–	21.4	–	–	–	–	–	–	–	–
Virginia	155	9.7	4.5	17.4	7.7	–	5.2	20.6	7.7	4.5	18.7	2.6
Washington	83	12.0	–	13.3	–	–	8.4	21.7	4.8	8.4	26.5	–
West Virginia	51	9.8	–	7.8	–	–	11.8	39.2	5.9	–	17.6	–
Wisconsin	103	27.2	–	9.7	3.9	–	10.7	17.5	7.8	–	19.4	–
Wyoming	37	–	–	–	–	–	8.1	29.7	–	–	35.1	–

[1] Includes 1 fatality that occurred within the territorial boundaries of the United States, but a State of incident could not be determined.
[2] Based on the 2000 Standard Occupational Classification.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria. There were 7 fatalities for which there was insufficient information to determine a specific occupation classification.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-4. **Fatal occupational injuries by State and event or exposure, 2003**

State of injury	Total fatalities (number)[1]	Event or exposure[2] (percent)					
		Transportation incidents[3]	Assaults and violent acts[4]	Contact with objects and equipment	Falls	Exposure to harmful substances or environments	Fires and explosions
Total	5,575	42.4	16.2	16.4	12.5	8.7	3.6
Alabama	124	50.8	12.9	20.2	9.7	5.6	–
Alaska	28	46.4	25.0	10.7	–	10.7	–
Arizona	80	46.2	11.2	15.0	12.5	6.2	6.2
Arkansas	87	55.2	6.9	18.4	11.5	4.6	3.4
California	459	38.1	18.1	16.8	15.5	7.8	2.8
Colorado	102	38.2	22.5	13.7	18.6	3.9	–
Connecticut	36	47.2	25.0	11.1	11.1	–	–
Delaware	9	–	–	–	–	33.3	–
District of Columbia	19	–	36.8	–	31.6	15.8	–
Florida	347	44.1	17.9	12.1	10.4	12.4	2.9
Georgia	199	43.7	22.6	13.6	11.6	6.0	2.5
Hawaii	21	33.3	14.3	19.0	14.3	14.3	–
Idaho	43	55.8	11.6	14.0	11.6	–	–
Illinois	200	32.5	21.5	16.0	18.0	10.5	1.5
Indiana	132	46.2	18.2	14.4	12.1	6.1	3.0
Iowa	76	55.3	3.9	18.4	6.6	10.5	5.3
Kansas	78	52.6	15.4	14.1	11.5	5.1	–
Kentucky	145	53.1	8.3	17.2	7.6	6.9	6.2
Louisiana	95	41.1	9.5	29.5	5.3	12.6	–
Maine	23	39.1	–	30.4	13.0	17.4	–
Maryland	92	38.0	18.5	9.8	16.3	13.0	4.3
Massachusetts	78	35.9	10.3	15.4	30.8	–	3.8
Michigan	152	38.2	14.5	19.7	11.2	13.8	2.0
Minnesota	72	41.7	12.5	25.0	15.3	–	–
Mississippi	102	41.2	19.6	14.7	7.8	12.7	2.9
Missouri	154	55.8	10.4	13.0	11.0	7.8	1.9
Montana	39	64.1	15.4	7.7	7.7	–	–
Nebraska	51	54.9	11.8	21.6	–	5.9	–
Nevada	52	40.4	15.4	21.2	15.4	7.7	–
New Hampshire	19	36.8	15.8	21.1	15.8	–	–
New Jersey	104	39.4	15.4	17.3	18.3	6.7	2.9
New Mexico	46	41.3	28.3	13.0	6.5	–	6.5
New York (including N.Y.C.)	227	33.9	29.1	11.0	15.4	6.6	4.0
New York City	94	12.8	45.7	9.6	14.9	9.6	7.4
North Carolina	182	37.9	15.9	15.9	13.2	10.4	6.6
North Dakota	26	61.5	–	23.1	11.5	–	–
Ohio	206	41.7	13.6	15.5	11.2	13.6	4.4
Oklahoma	100	50.0	16.0	17.0	5.0	5.0	6.0
Oregon	75	57.3	5.3	17.3	6.7	8.0	4.0
Pennsylvania	208	39.4	16.3	16.3	15.4	10.6	1.9
Rhode Island	18	–	–	16.7	–	–	44.4
South Carolina	115	33.9	23.5	17.4	11.3	11.3	–
South Dakota	28	42.9	–	42.9	–	–	–
Tennessee	137	40.1	19.7	23.4	10.2	3.6	2.9
Texas	491	40.9	18.3	14.3	10.6	10.4	5.5
Utah	54	63.0	9.3	16.7	5.6	5.6	–
Vermont	14	64.3	–	28.6	–	–	–
Virginia	155	36.8	15.5	17.4	15.5	10.3	4.5
Washington	83	34.9	10.8	18.1	20.5	8.4	7.2
West Virginia	51	47.1	–	15.7	11.8	11.8	9.8
Wisconsin	103	32.0	13.6	25.2	19.4	7.8	–
Wyoming	37	70.3	–	10.8	8.1	8.1	–

[1] Includes 1 fatality that occurred within the territorial boundaries of the United States, but a State of incident could not be determined.
[2] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[3] Includes highway, nonhighway, air, water, rail fatalities, and fatalities resulting from being struck by a vehicle.
[4] Includes violence by persons, self-inflicted injury, and attacks by animals.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-5. **Fatal occupational injuries resulting from transportation incidents and homicides by State, 2003**

State of injury	Total fatalities (number)[1]	Tranportation incidents (percent)					Homicides (percent)		
		Total[2]	Highway incidents[3]	Non-highway incidents	Worker struck by vehicle	All other transportation incidents	Total	Homicides by shooting	All other homicides
Total	5,575	42.4	24.3	6.2	6.0	5.9	11.3	8.7	2.6
Alabama	124	50.8	33.1	4.8	5.6	7.3	11.3	10.5	–
Alaska	28	46.4	–	–	–	42.9	10.7	–	–
Arizona	80	46.2	30.0	3.8	–	10.0	7.5	5.0	–
Arkansas	87	55.2	44.8	4.6	4.6	–	6.9	3.4	3.4
California	459	38.1	19.6	5.0	7.2	6.3	13.7	10.0	3.7
Colorado	102	38.2	24.5	2.9	4.9	5.9	9.8	8.8	–
Connecticut	36	47.2	33.3	–	8.3	–	19.4	16.7	–
Delaware	9	–	–	–	–	–	–	–	–
District of Columbia	19	–	–	–	–	–	31.6	26.3	–
Florida	347	44.1	25.1	3.7	8.4	6.9	12.4	9.2	3.2
Georgia	199	43.7	27.1	5.0	5.5	6.0	16.6	14.6	2.0
Hawaii	21	33.3	14.3	–	–	14.3	14.3	–	–
Idaho	43	55.8	41.9	7.0	–	–	–	–	–
Illinois	200	32.5	12.5	6.0	8.5	5.5	18.5	14.5	4.0
Indiana	132	46.2	30.3	11.4	3.8	–	10.6	7.6	3.0
Iowa	76	55.3	22.4	21.1	5.3	6.6	–	–	–
Kansas	78	52.6	35.9	5.1	7.7	3.8	3.8	3.8	–
Kentucky	145	53.1	24.8	17.9	7.6	2.8	4.1	2.1	2.1
Louisiana	95	41.1	20.0	3.2	6.3	11.6	9.5	8.4	–
Maine	23	39.1	–	–	–	17.4	–	–	–
Maryland	92	38.0	25.0	–	8.7	–	14.1	6.5	7.6
Massachusetts	78	35.9	5.1	3.8	5.1	21.8	3.8	3.8	–
Michigan	152	38.2	17.8	12.5	5.9	2.0	9.2	7.9	–
Minnesota	72	41.7	25.0	6.9	6.9	–	9.7	6.9	–
Mississippi	102	41.2	34.3	–	–	2.9	17.6	14.7	2.9
Missouri	154	55.8	33.1	15.6	4.5	2.6	5.2	3.9	–
Montana	39	64.1	48.7	10.3	–	–	–	–	–
Nebraska	51	54.9	39.2	11.8	–	–	5.9	–	–
Nevada	52	40.4	23.1	–	7.7	5.8	11.5	5.8	5.8
New Hampshire	19	36.8	21.1	–	–	–	–	–	–
New Jersey	104	39.4	23.1	3.8	12.5	–	11.5	8.7	2.9
New Mexico	46	41.3	37.0	–	–	–	17.4	13.0	–
New York (including N.Y.C.)	227	33.9	15.9	2.6	7.5	7.9	20.7	13.7	7.0
New York City	94	12.8	5.3	–	4.3	–	34.0	25.5	8.5
North Carolina	182	37.9	20.9	4.9	5.5	6.6	12.6	11.0	1.6
North Dakota	26	61.5	38.5	–	–	–	–	–	–
Ohio	206	41.7	23.3	10.2	4.9	3.4	6.8	4.9	1.9
Oklahoma	100	50.0	32.0	6.0	7.0	5.0	10.0	10.0	–
Oregon	75	57.3	34.7	5.3	4.0	13.3	–	–	–
Pennsylvania	208	39.4	19.7	6.7	10.1	2.9	13.5	10.1	3.4
Rhode Island	18	–	–	–	–	–	–	–	–
South Carolina	115	33.9	22.6	4.3	5.2	–	18.3	15.7	2.6
South Dakota	28	42.9	17.9	14.3	–	–	–	–	–
Tennessee	137	40.1	21.9	9.5	–	7.3	14.6	11.7	2.9
Texas	491	40.9	24.0	1.6	6.5	8.8	14.1	10.8	3.3
Utah	54	63.0	44.4	–	–	13.0	–	–	–
Vermont	14	64.3	42.9	–	–	–	–	–	–
Virginia	155	36.8	18.1	8.4	3.9	6.5	12.9	10.3	2.6
Washington	83	34.9	10.8	8.4	9.6	6.0	6.0	4.8	–
West Virginia	51	47.1	33.3	9.8	–	–	–	–	–
Wisconsin	103	32.0	21.4	6.8	3.9	–	7.8	6.8	–
Wyoming	37	70.3	54.1	–	–	–	–	–	–

[1] Includes 1 fatality that occurred within the territorial boundaries of the United States, but a State of incident could not be determined.
[2] Includes highway, nonhighway, air, water, rail fatalities, and fatalities resulting from being struck by a vehicle.
[3] "Highway" includes deaths to vehicle occupants resulting from traffic incidents that occur on the public roadway, shoulder, or surrounding area. It excludes incidents occurring entirely off the roadway, such as in parking lots and on farms; incidents involving trains; and deaths to pedestrians or other non passengers.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-6. **Fatal occupational injuries by selected metropolitan areas and major industry sectors, 2003**

Metropolitan area[1]	Total fatalities (number)	Private industry[2] (percent)										Government[3] (percent)
		Natural resources and mining	Construction	Manufacturing	Trade, transportation, and utilities	Information	Financial activities	Professional and business services	Educational and health services	Leisure and hospitality	Other services, except public administration	
Total U.S.[4]	5,575	15.2	20.3	7.5	24.7	1.1	2.3	8.1	2.6	4.9	3.5	9.5
Atlanta-Sandy Springs-Marietta, GA	89	–	29.2	11.2	23.6	–	4.5	6.7	3.4	5.6	6.7	7.9
Baltimore-Towson, MD	41	–	36.6	7.3	34.1	–	–	–	–	–	–	–
Boston-Cambridge-Quincy, MA-NH	44	–	38.6	6.8	20.5	–	–	11.4	–	–	–	–
Chicago-Naperville-Joliet, IL-IN-WI	139	–	25.9	10.1	23.0	–	3.6	6.5	2.2	7.2	5.8	14.4
Cincinnati-Middletown, OH-KY-IN	42	11.9	23.8	14.3	16.7	–	7.1	–	–	–	–	11.9
Cleveland-Elyria-Mentor, OH	24	–	16.7	20.8	12.5	–	–	16.7	–	–	–	–
Dallas-Fort Worth-Arlington, TX	93	5.4	28.0	6.5	26.9	–	4.3	11.8	–	10.8	3.2	–
Denver-Aurora, CO	42	–	21.4	–	21.4	–	–	–	9.5	16.7	11.9	9.5
Detroit-Warren-Livonia, MI	53	–	17.0	15.1	35.8	–	–	–	–	11.3	–	11.3
Houston-Baytown-Sugar Land, TX	104	9.6	20.2	9.6	24.0	–	4.8	14.4	–	5.8	3.8	5.8
Los Angeles-Long Beach-Santa Ana, CA	125	–	16.8	9.6	30.4	3.2	–	20.0	–	5.6	5.6	6.4
Miami-Fort Lauderdale-Miami Beach, FL	118	12.7	22.0	5.9	24.6	–	5.9	7.6	–	9.3	2.5	7.6
Minneapolis-St. Paul-Bloomington, MN-WI	20	–	20.0	–	55.0	–	–	–	–	–	–	–
New York-Northern New Jersey-Long Island, NY-NJ-PA	198	1.5	27.3	4.0	26.3	–	4.5	8.6	1.5	8.6	4.5	13.1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	78	5.1	20.5	10.3	23.1	–	3.8	7.7	7.7	7.7	7.7	5.1
Phoenix-Mesa-Scottsdale, AZ	35	–	25.7	–	34.3	–	–	–	8.6	–	–	8.6
Pittsburgh, PA	33	18.2	18.2	–	24.2	–	–	–	–	–	–	12.1
Riverside-San Bernardino-Ontario, CA	63	–	20.6	6.3	25.4	–	6.3	7.9	–	–	–	20.6
San Diego-Carlsbad-San Marcos, CA	40	–	32.5	–	10.0	–	–	7.5	–	15.0	–	22.5
San Francisco-Oakland-Fremont, CA	35	–	31.4	8.6	31.4	–	–	11.4	–	–	–	11.4
Seattle-Tacoma-Bellevue, WA	30	–	33.3	13.3	13.3	–	–	13.3	–	–	–	10.0
St. Louis, MO-IL	45	–	33.3	8.9	26.7	–	–	6.7	–	–	–	6.7
Tampa-St. Petersburg-Clearwater, FL	36	–	38.9	–	16.7	–	–	11.1	8.3	–	8.3	–
Washington-Arlington-Alexandria, DC-VA-MD-WV	80	–	36.2	–	12.5	–	5.0	17.5	–	–	6.2	12.5

[1] Metropolitan areas used in this table are categorized into Metropolitan Statistical Areas (MSAs) and are based on definitions from the Office of Management and Budget Bulletin Number 04-03, February 18, 2004.
[2] Classified according to the North American Industry Classification System, 2002.
[3] Includes fatalities to workers employed by governmental organizations regardless of industry.
[4] Also includes fatalities occurring in nonmetropolitan areas.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-7. **Fatal occupational injuries by selected metropolitan areas and major occupational group, 2003**

Metropolitan area[1]	Total fatalities (number)	Occupation[2] (percent)										Military occupations (percent)
		Management, business, and financial occupations	Professional and related occupations	Service occupations	Sales and related occupations	Office and administrative support occupations	Farming, fishing, and forestry occupations	Construction and extraction occupations	Installation, maintenance, and repair occupations	Production occupations	Transportation and material moving occupations	
Total U.S.[3]	5,575	12.0	4.7	12.6	6.2	2.0	5.5	18.6	7.1	5.1	25.0	1.1
Atlanta-Sandy Springs-Marietta, GA	89	6.7	5.6	14.6	6.7	–	–	24.7	5.6	9.0	23.6	–
Baltimore-Towson, MD	41	7.3	–	9.8	7.3	–	–	26.8	9.8	–	34.1	–
Boston-Cambridge-Quincy, MA-NH	44	–	6.8	9.1	–	–	–	40.9	–	–	22.7	–
Chicago-Naperville-Joliet, IL-IN-WI	139	11.5	6.5	17.3	8.6	–	–	23.0	2.2	6.5	23.7	–
Cincinnati-Middletown, OH-KY-IN	42	14.3	–	21.4	–	–	–	19.0	11.9	–	23.8	–
Cleveland-Elyria-Mentor, OH	24	–	–	20.8	–	12.5	–	16.7	–	12.5	12.5	–
Dallas-Fort Worth-Arlington, TX	93	7.5	–	9.7	16.1	–	–	28.0	10.8	4.3	20.4	–
Denver-Aurora, CO	42	7.1	16.7	19.0	11.9	–	–	14.3	14.3	–	11.9	–
Detroit-Warren-Livonia, MI	53	7.5	–	9.4	9.4	–	–	24.5	–	15.1	24.5	–
Houston-Baytown-Sugar Land, TX	104	–	3.8	17.3	14.4	–	4.8	21.2	7.7	4.8	23.1	–
Los Angeles-Long Beach-Santa Ana, CA	125	4.8	4.0	21.6	5.6	4.8	–	14.4	12.8	8.0	23.2	–
Miami-Fort Lauderdale-Miami Beach, FL	118	5.1	4.2	20.3	6.8	–	5.9	18.6	7.6	7.6	22.0	–
Minneapolis-St. Paul-Bloomington, MN-WI	20	–	–	–	–	–	–	15.0	–	–	40.0	–
New York-Northern New Jersey-Long Island, NY-NJ-PA	198	5.6	2.0	19.7	10.6	3.5	–	26.3	6.6	1.5	23.7	–
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	78	12.8	–	14.1	5.1	5.1	–	20.5	7.7	6.4	24.4	–
Phoenix-Mesa-Scottsdale, AZ	35	8.6	–	14.3	–	–	–	11.4	11.4	–	42.9	–
Pittsburgh, PA	33	12.1	–	9.1	9.1	12.1	–	15.2	12.1	–	24.2	–
Riverside-San Bernardino-Ontario, CA	63	6.3	4.8	9.5	–	4.8	–	17.5	9.5	4.8	27.0	12.7
San Diego-Carlsbad-San Marcos, CA	40	–	–	27.5	7.5	–	–	27.5	7.5	–	–	–
San Francisco-Oakland-Fremont, CA	35	–	8.6	11.4	–	–	–	28.6	11.4	–	28.6	–
Seattle-Tacoma-Bellevue, WA	30	10.0	–	13.3	–	–	–	36.7	–	–	23.3	–
St. Louis, MO-IL	45	11.1	6.7	15.6	–	–	–	24.4	8.9	6.7	20.0	–
Tampa-St. Petersburg-Clearwater, FL	36	8.3	–	22.2	–	–	–	33.3	11.1	–	11.1	–
Washington-Arlington-Alexandria, DC-VA-MD-WV	80	3.8	8.8	21.2	7.5	–	–	31.2	3.8	6.2	15.0	–

[1] Metropolitan areas used in this table are categorized into Metropolitan Statistical Areas (MSAs) and are based on definitions from the Office of Management and Budget Bulletin Number 04-03, February 18, 2004.
[2] Based on the 2000 Standard Occupational Classification.
[3] Also includes fatalities occurring in nonmetropolitan areas.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-8. **Fatal occupational injuries by selected metropolitan areas and event or exposure, 2003**

Metropolitan area[1]	Total fatalities (number)	Event or exposure[2] (percent)					
		Transportation incidents[3]	Assaults and violent acts[4]	Contact with objects and equipment	Falls	Exposure to harmful substances or environments	Fires and explosions
Total U.S.[5]	5,575	42.4	16.2	16.4	12.5	8.7	3.6
Atlanta-Sandy Springs-Marietta, GA	89	34.8	34.8	10.1	11.2	5.6	3.4
Baltimore-Towson, MD	41	36.6	24.4	–	14.6	17.1	–
Boston-Cambridge-Quincy, MA-NH	44	25.0	15.9	22.7	29.5	–	–
Chicago-Naperville-Joliet, IL-IN-WI	139	23.7	29.5	12.9	20.9	12.9	–
Cincinnati-Middletown, OH-KY-IN	42	40.5	14.3	14.3	11.9	14.3	–
Cleveland-Elyria-Mentor, OH	24	29.2	12.5	20.8	12.5	20.8	–
Dallas-Fort Worth-Arlington, TX	93	22.6	31.2	12.9	12.9	15.1	5.4
Denver-Aurora, CO	42	26.2	31.0	14.3	21.4	7.1	–
Detroit-Warren-Livonia, MI	53	34.0	26.4	17.0	9.4	13.2	–
Houston-Baytown-Sugar Land, TX	104	32.7	23.1	11.5	15.4	10.6	6.7
Los Angeles-Long Beach-Santa Ana, CA	125	21.6	22.4	17.6	18.4	12.8	4.8
Miami-Fort Lauderdale-Miami Beach, FL	118	43.2	26.3	8.5	10.2	10.2	–
Minneapolis-St. Paul-Bloomington, MN-WI	20	45.0	25.0	20.0	–	–	–
New York-Northern New Jersey-Long Island, NY-NJ-PA	198	27.8	29.3	11.6	19.2	8.6	3.5
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	78	30.8	26.9	6.4	21.8	12.8	–
Phoenix-Mesa-Scottsdale, AZ	35	40.0	22.9	14.3	14.3	–	–
Pittsburgh, PA	33	51.5	12.1	12.1	9.1	9.1	–
Riverside-San Bernardino-Ontario, CA	63	52.4	15.9	14.3	9.5	7.9	–
San Diego-Carlsbad-San Marcos, CA	40	35.0	30.0	10.0	15.0	7.5	–
San Francisco-Oakland-Fremont, CA	35	31.4	28.6	17.1	11.4	–	–
Seattle-Tacoma-Bellevue, WA	30	23.3	13.3	23.3	26.7	–	–
St. Louis, MO-IL	45	28.9	11.1	17.8	24.4	15.6	–
Tampa-St. Petersburg-Clearwater, FL	36	30.6	16.7	19.4	8.3	19.4	–
Washington-Arlington-Alexandria, DC-VA-MD-WV	80	30.0	18.8	13.8	23.8	11.2	–

[1] Metropolitan areas used in this table are categorized into Metropolitan Statistical Areas (MSAs) and are based on definitions from the Office of Management and Budget Bulletin Number 04-03, February 18, 2004.
[2] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[3] Includes highway, nonhighway, air, water, rail fatalities, and fatalities resulting from being struck by a vehicle.
[4] Includes violence by persons, self-inflicted injury, and attacks by animals.
[5] Also includes fatalities occurring in nonmetropolitan areas.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE B-9. **Fatal occupational injuries resulting from transportation incidents and homicides by State, 2003**

Metropolitan area[1]	Total fatalities (number)	Transporation incidents (percent)					Homicides (percent)		
		Total[2]	Highway incidents[3]	Non-highway incidents	Worker struck by vehicle	All other transportation incidents	Total	Homicides by shooting	All other homicides
Total U.S.[4]	5,575	42.4	24.3	6.2	6.0	5.9	11.3	8.7	2.6
Atlanta-Sandy Springs-Marietta, GA	89	34.8	19.1	3.4	6.7	5.6	27.0	23.6	3.4
Baltimore-Towson, MD	41	36.6	19.5	–	12.2	–	19.5	9.8	9.8
Boston-Cambridge-Quincy, MA-NH	44	25.0	9.1	6.8	9.1	–	–	–	–
Chicago-Naperville-Joliet, IL-IN-WI	139	23.7	9.4	2.2	10.1	2.2	26.6	21.6	5.0
Cincinnati-Middletown, OH-KY-IN	42	40.5	21.4	–	11.9	–	9.5	–	–
Cleveland-Elyria-Mentor, OH	24	29.2	12.5	–	12.5	–	12.5	–	–
Dallas-Fort Worth-Arlington, TX	93	22.6	12.9	3.2	4.3	–	25.8	19.4	6.5
Denver-Aurora, CO	42	26.2	14.3	–	–	–	16.7	14.3	–
Detroit-Warren-Livonia, MI	53	34.0	22.6	–	7.5	–	22.6	18.9	–
Houston-Baytown-Sugar Land, TX	104	32.7	10.6	–	12.5	7.7	19.2	15.4	3.8
Los Angeles-Long Beach-Santa Ana, CA	125	21.6	12.0	4.0	4.8	–	19.2	16.0	3.2
Miami-Fort Lauderdale-Miami Beach, FL	118	43.2	21.2	4.2	8.5	9.3	22.0	20.3	–
Minneapolis-St. Paul-Bloomington, MN-WI	20	45.0	30.0	–	–	–	20.0	20.0	–
New York-Northern New Jersey-Long Island, NY-NJ-PA	198	27.8	13.1	3.0	10.1	1.5	21.2	16.2	5.1
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	78	30.8	14.1	3.8	10.3	–	23.1	19.2	3.8
Phoenix-Mesa-Scottsdale, AZ	35	40.0	25.7	–	–	–	14.3	8.6	–
Pittsburgh, PA	33	51.5	18.2	9.1	18.2	–	12.1	9.1	–
Riverside-San Bernardino-Ontario, CA	63	52.4	25.4	4.8	7.9	14.3	9.5	6.3	–
San Diego-Carlsbad-San Marcos, CA	40	35.0	25.0	–	7.5	–	22.5	15.0	7.5
San Francisco-Oakland-Fremont, CA	35	31.4	14.3	–	14.3	–	20.0	14.3	–
Seattle-Tacoma-Bellevue, WA	30	23.3	–	–	20.0	–	10.0	–	–
St. Louis, MO-IL	45	28.9	17.8	8.9	–	–	6.7	–	6.7
Tampa-St. Petersburg-Clearwater, FL	36	30.6	16.7	–	–	–	11.1	–	–
Washington-Arlington-Alexandria, DC-VA-MD-WV	80	30.0	15.0	–	10.0	–	15.0	8.8	6.2

[1] Metropolitan areas used in this table are categorized into Metropolitan Statistical Areas (MSAs) and are based on definitions from the Office of Management and Budget Bulletin Number 04-03, February 18, 2004.
[2] Includes highway, nonhighway, air, water, rail fatalities, and fatalities resulting from being struck by a vehicle.
[3] "Highway" includes deaths to vehicle occupants resulting from traffic incidents that occur on the public roadway, shoulder, or surrounding area. It excludes incidents occurring entirely off the roadway, such as in parking lots and on farms; incidents involving trains; and deaths to pedestrians or other non passengers.
[4] Also includes fatalities occurring in nonmetropolitan areas.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication criteria.
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

Appendix C. Census of Fatal Occupational Injuries Fatality Rates

Fatality rates may be used to compare the risk of incurring injury among worker groups with varying employment levels. Overall, the fatality rate for all U.S. workers in 2003 was 4.0 fatalities per 100,000 workers—almost identical to the rate of 2002, which was the lowest rate for the fatality census since its inception in 1992. The fatality rate varied by worker demographics, occupation, and industry. For example, Hispanic workers, who have consistently experienced a higher rate of fatal injury than have non-Hispanic workers, incurred a rate of 4.5 fatalities per 100,000 workers, compared with the rate of 4.0 fatalities per 100,000 workers among white, non-Hispanic workers.

Farming, forestry, and fishing occupations had the highest fatal work injury rate among the major occupational groups (28.0 fatalities per 100,000 workers). Similarly, among private industry groups, the agriculture, forestry, farming, and hunting industry, had the highest fatality rate, with 31.3 fatalities per 100,000 workers. The second highest fatality rate belonged to the mining industry, which includes oil and gas extraction; mining had a fatality rate of 26.9 per 100,000 workers.

Fatality rates were computed using estimates of civilian workers (aged 16 and older) from the Current Population Survey (CPS). The numerator (fatalities) and denominator (employment) of the rate should refer to the same group of workers as closely as possible. Because CPS employment data exclude workers under the age of 16, fatalities to these workers were excluded from the numerator in the calculation. Where appropriate, resident military employment figures from the U.S. Department of Defense were added to CPS figures to calculate rates. These rates were computed for 2003 as:

Fatality rate (2003) = (N_{03}/W_{03}) * 100,000,
where

N_{year} = number of fatally injured workers, aged 16 and older

W_{year} = annual average number of employed workers aged 16 and older

There are a number of limitations to the fatality rates including the following:

- Because the CPS employment data used to calculate the rates are estimates based on a sample of households rather than a complete count, the CPS estimates and, therefore, the fatality rates may have sampling errors. Data users may use relative standard errors of the CPS employment estimates to approximate confidence intervals for the fatality rates.

- The CPS categorizes workers according to their primary job, which may differ from the job in which the decedent was working when fatally injured, as reported in the Census of Fatal Occupational Injuries.

- The rates are based on employment. They factor out differences in the number of fatal work injuries between worker groups due to different employment levels. They do not take into account differences in the number of hours worked. Hours-based rates, which factor out these differences, generally are considered more accurate. However, because of limitations in the availability of data for hours worked, the rates presented in this publication are employment based.

See "Explanatory Notes and Estimates of Error" in the January 2004 issue of *Employment and Earnings* for an explanation of CPS sampling, estimation, and standard error computations.

TABLE C-1. **Fatal occupational injuries, employment, and rates of fatal occupational injuries by selected worker characteristics, occupations, and industries, 2003**

Characteristic	Total fatalities	Total employment[1] (in thousands)	Fatality rate[2]
Total	5,575	138,928	4.0
Employee status			
Wage and salary workers[3]	4,405	128,506	3.4
Self-employed[4]	1,170	10,421	11.1
Sex			
Men	5,129	74,347	6.9
Women	446	64,581	0.7
Age category			
16 to 17 years	28	2,314	1.2
18 to 19 years	84	3,708	2.3
20 to 24 years	462	13,841	3.3
25 to 34 years	1,018	30,788	3.3
35 to 44 years	1,329	35,119	3.8
45 to 54 years	1,301	31,951	4.1
55 to 64 years	802	16,600	4.8
65 years and over	523	4,608	11.3
Race or ethnic origin[5]			
White	3,988	98,880	4.0
Black or African American	543	14,497	3.7
Hispanic or Latino	794	17,479	4.5
Occupation[6]			
Management, professional, and related occupations	930	47,929	1.9
Management, business, and financial operations occupations	667	19,934	3.3
Management occupations	635	14,468	4.3
Farm, ranch, and other agricultural managers	28	206	13.6
Farmers and ranchers	332	825	39.5
Construction managers	64	680	9.4
Food service managers	39	875	4.5
Business and financial operations occupations	32	5,465	0.6
Professional and related occupations	263	27,995	0.9
Architecture and engineering occupations	54	2,727	2.0
Education, training, and library occupations	30	7,768	0.4
Arts, design, entertainment, sports, and media occupations	58	2,663	2.2
Healthcare practitioner and technical occupations	49	6,648	0.7
Service occupations	704	22,086	3.2
Protective service occupations	312	2,727	11.4
Fire fighters (exc. supervisors)	45	258	17.4
Police and sheriff's patrol officers	128	612	20.9
Security guards and gaming surveillance officers	71	781	9.1
Food preparation and serving related occupations	72	7,254	1.0
Building and grounds cleaning and maintenance occupations	247	4,947	5.0
Janitors and building cleaners	43	1,973	2.2
Grounds maintenance workers	156	1,135	13.6
Personal care and service occupations	53	4,232	1.2
Sales and office occupations	460	35,496	1.3
Sales and related occupations	348	15,960	2.2
First-line supervisors/managers of retail sales workers	124	3,389	3.7
First-line supervisors/managers of non-retail sales workers	37	1,388	2.7
Cashiers	50	2,903	1.7
Retail salespersons	47	3,113	1.5
Office and administrative support occupations	112	19,536	0.6
Natural resources, construction, and maintenance occupations	1,737	14,205	12.1
Farming, fishing, and forestry occupations	305	1,050	28.0
Miscellaneous agricultural workers	130	741	16.5
Fishers and related fishing workers	48	40	115.0
Logging workers	105	79	132.9

See footnotes at end of table.

TABLE C-1. **Fatal occupational injuries, employment, and rates of fatal occupational injuries by selected worker characteristics, occupations, and industries, 2003 — Continued**

Characteristic	Total fatalities	Total employment[1] (in thousands)	Fatality rate[2]
Occupation[6] - continued			
Construction and extraction occupations	1,038	8,114	12.8
Carpenters	96	1,595	6.0
Construction laborers	290	1,151	25.2
Operating engineers and other construction equipment operators	57	376	15.2
Electricians	87	774	11.2
Painters, construction and maintenance	56	660	8.5
Pipelayers, plumbers, pipefitters, and steamfitters	38	595	6.4
Roofers	55	233	23.6
Structural iron and steel workers	37	71	52.1
Helpers, construction trades	26	114	21.9
Installation, maintenance, and repair occupations	394	5,041	7.8
First-line supervisors/managers of mechanics, installers, and repair	34	340	10.0
Automotive service technicians and mechanics	57	884	6.4
Heating, air conditioning, and refrigeration mechanics and installer	31	350	8.9
Electrical power-line installers and repairers	38	111	34.2
Production, transportation, and material moving occupations	1,676	18,020	9.3
Production occupations	283	9,700	2.9
First-line supervisors/managers of production and operating workers	36	939	3.8
Welding, soldering, and brazing workers	50	528	9.5
Transportation and material moving occupations	1,393	8,320	16.7
Aircraft pilots and flight engineers	114	116	98.3
Driver/sales workers and truck drivers	862	3,214	26.8
Taxi drivers and chauffeurs	64	286	22.4
Industrial truck and tractor operators	42	534	7.7
Laborers and freight, stock, and material movers, hand	106	1,748	6.1
Refuse and recyclable material collectors	43	63	68.3
Military occupations	62	1,192	5.2
Industry[7]			
Private industry	5,043	118,034	4.2
Agriculture, forestry, fishing, and hunting	709	2,209	31.3
Crop production	334	883	36.5
Animal production	159	966	16.1
Logging	118	119	99.2
Fishing, hunting, and trapping	49	51	92.2
Support activities for agriculture and forestry	44	175	25.1
Mining[8]	141	525	26.9
Oil and gas extraction	17	78	21.8
Coal mining	27	78	34.6
Support activities for mining	69	235	29.4
Utilities	32	866	3.7
Construction	1,131	9,632	11.7
Manufacturing	420	16,832	2.5
Food manufacturing	59	1,611	3.7
Animal food, grain and oilseed milling	9	151	6.0
Animal slaughtering and processing	19	471	4.0
Chemical manufacturing	28	1,299	2.2
Plastics and rubber products manufacturing	26	704	3.7
Nonmetallic mineral product manufacturing	46	516	8.9
Cement, concrete, lime, and gypsum product manufacturing	29	216	13.4
Primary metal manufacturing	33	559	5.9
Fabricated metal product manufacturing	43	1,397	3.1
Machinery manufacturing	26	1,292	2.0
Transportation equipment manufacturing	44	2,232	2.0
Wood product manufacturing	37	517	7.2
Wholesale trade	191	4,476	4.2
Merchant wholesalers, durable goods	102	2,276	4.5
Machinery, equipment, and supplies, merchant wholesalers	26	494	5.3

See footnotes at end of table.

TABLE C-1. **Fatal occupational injuries, employment, and rates of fatal occupational injuries by selected worker characteristics, occupations, and industries, 2003 — Continued**

Characteristic	Total fatalities	Total employment[1] (in thousands)	Fatality rate[2]
Industry[7] - continued			
Merchant wholesalers, nondurable goods	81	2,104	3.8
Groceries and related products, merchant wholesalers	25	942	2.5
Retail trade	344	16,159	2.1
Motor vehicle and parts dealers	67	2,049	3.3
Automobile dealers	26	1,426	1.8
Auto parts, accessories, and tire stores	27	476	5.7
Building material and garden supply stores	34	1,450	2.3
Food and beverage stores	99	3,088	3.2
Grocery stores	80	2,678	3.0
Gasoline stations	42	506	8.3
Miscellaneous store retailers	25	1,242	2.0
Nonstore retailers	22	634	3.3
Transportation and warehousing	808	4,590	17.6
Air transportation	52	622	8.4
Rail transportation	18	233	7.7
Water transportation	24	64	37.5
Truck transportation	517	1,808	28.5
Transit and ground passenger transportation	74	529	14.0
Bus service and urban transit	15	315	4.8
Taxi and limousine service	59	214	27.6
Services incidental to transportation	66	423	15.6
Warehousing and storage	23	223	10.3
Information	64	3,513	1.8
Publishing industries, except internet	31	844	3.6
Newspaper publishers	27	441	5.9
Finance, insurance, real estate, and rental and leasing	129	9,551	1.4
Finance and insurance	45	6,724	0.7
Real estate and rental and leasing	84	2,827	3.0
Real estate	52	2,323	2.2
Professional, scientific, management, administrative	453	13,506	3.3
Professional, scientific, and technical services	97	8,037	1.2
Administrative and support and waste management services	356	5,427	6.5
Employment services	19	920	2.1
Investigation and security services	35	668	5.2
Services to buildings and dwellings (except cleaning during construction and immediately after construction)	35	1,153	3.0
Landscaping services	154	1,080	14.1
Waste management and remediation services	91	334	27.2
Educational, health and social services	143	18,184	0.8
Educational services	41	3,290	1.2
Health care and social assistance	102	14,894	0.7
Ambulatory health care services	36	5,215	0.7
Hospitals	24	4,997	0.5
Nursing and residential care facilities	20	2,296	0.9
Social assistance	20	2,381	0.8
Arts, entertainment, recreation, accommodation, and food services	275	11,215	2.4
Arts, entertainment, and recreation	88	2,241	3.9
Independent artists, performing arts, spectator sports, and related industries	42	724	5.7
Other amusement, gambling, and recreation industries	38	1,336	2.8
Accommodation and food services	187	8,974	2.1
Accommodation	40	1,508	2.7
Traveler accommodation	28	1,419	2.0
Food services and drinking places	146	7,464	2.0
Restaurants and other food services	113	7,233	1.6
Drinking places, alcoholic beverages	33	231	14.3
Other services (except public administration)	194	6,777	2.8
Automotive repair and maintenance	84	1,183	7.1
Personal and laundry services	42	2,044	2.1
Membership associations and organizations	30	1,869	1.6

See footnotes at end of table.

TABLE C-1. **Fatal occupational injuries, employment, and rates of fatal occupational injuries by selected worker characteristics, occupations, and industries, 2003 — Continued**

Characteristic	Total fatalities	Total employment[1] (in thousands)	Fatality rate[2]
Industry[7] - continued			
Government[9]	532	20,893	2.5
Federal	98	4,432	2.2
State	102	5,639	1.8
Local	326	10,821	3.0

[1] The employment figures, except for military, are annual average estimates of employed civilians, 16 years of age and older, from the Current Population Survey (CPS), 2003. The resident military figure, obtained from the Department of Defense, was added to the CPS employment total.

[2] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers.

[3] May include volunteers and other workers receiving compensation.

[4] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.

[5] Persons identified as Hispanic may be of any race. The individual race categories shown exclude data for Hispanic workers.

[6] Based on the 2000 Standard Occupational Classification System.

[7] Classified according to the North American Industry Classification System, 2002.

[8] Includes fatalities at all establishments categorized as Mining (Sector 21) in the 2002 North American Industry Classification system including establishments not governed by the Mine Safety and Health Administration (MSHA) rules and reporting, such as those in Oil and Gas Extraction.

[9] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Selected rate categories had 5 or more work injury fatalities in 2003. Totals for major categories may include subcategories not shown separately. Figures may not add to totals because of rounding. There were 25 fatal injuries to workers under the age of 16 years that were not included in the rate calculations to maintain consistency with the CPS employment.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with state, New York City, District of Columbia, and federal agencies, Census of FatalOccupational Injuries.

Appendix D. Ten Occupations with the Highest Fatality Rates

This appendix presents a table that shows the ten occupations with the highest fatality rates per 100,000 employed. Fatality rates depict the risk of incurring a fatal work injury for workers in a given employment group expressed as the proportion of fatalities per standard measure (usually per 100,000 workers). This allows risk to be compared among different employment groups. To produce a fatality rate, the number of fatal work injuries in a given occupation is divided by the number of employed persons in that occupation, and multiplied by 100,000. While the table does present occupations with the highest fatality rates, it should be noted that other factors and considerations should be explored before labeling these occupations as the most dangerous.

An alternate method of calculating occupational fatality rates is to divide the number of fatalities in a given time period by the number of hours worked in the same time period. Using hours in the denominator is a preferable method because conceptually it will represent the amount of time an employee is exposed to a hazardous working environment. However, there are limitations in the availability of reliable hours data, therefore, employment is typically used as the denominator. The number or rate of nonfatal injuries is another factor that should be taken into consideration when trying to determine the most dangerous jobs. However, at this time, incidence rates for nonfatal injuries by occupation are not calculated. Additionally, it would be difficult to combine the fatal and nonfatal data because of the different methodologies used in collecting the data.

Another consideration to take into account when analyzing fatality rates is that they cannot be used to determine the "potential" occurrence of a work place fatality. To illustrate, in a given year the annual average actual employment for a given highly specialized occupation may be 100. If that occupation group reports one fatality, the rate will be calculated as 1,000 fatalities per 100,000 employed (which is an extremely high rate when compared to the 2003 average fatality rate of 4). The next year, if no fatalities are reported in that occupation, then the rate will be zero and it will appear to be a very safe occupation. A hypothetical example of such a scenario is the case of circus animal trainers. The occupation of circus animal trainer may be perceived as dangerous because of the potential of being fatally attacked by an animal. However, if no fatalities occurred in a given year, it could be stated that based on the fatality rate of zero that it is safer than the occupation of school teacher, which on average has a rate of about 1 fatality per 100,000 employed.

Employment based fatality rates can be used to reach broad conclusions about which occupations are relatively risky. While occupations can easily be ranked using this method it should be noted that if the other methods of assessing risk were introduced the rankings may differ.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Fatality rate[2]	132.9	115.0	98.3	68.3	52.1	34.2	26.8	25.2	23.6	22.4
Total count	105	48	114	43	37	38	862	290	55	64
State of incident										
Alabama	6	–	–	3	–	–	28	11	–	–
Alaska	–	9	4	–	–	–	–	–	–	–
Arizona	–	–	4	–	–	–	15	3	–	–
Arkansas	7	–	–	–	–	–	23	4	–	–
California	4	–	11	4	3	3	49	20	4	10
Colorado	–	–	4	–	–	–	9	4	–	–
Connecticut	–	–	–	–	–	–	8	–	–	–
Florida	–	9	5	6	3	6	45	27	–	–
Georgia	4	–	7	–	–	–	34	12	3	4
Hawaii	–	–	3	–	–	–	–	–	–	–
Idaho	–	–	–	–	–	–	5	–	–	–
Illinois	–	–	–	–	–	–	24	9	5	4
Indiana	–	–	–	–	–	–	29	5	–	–
Iowa	–	–	–	–	–	–	10	–	–	–
Kansas	–	–	–	–	–	–	10	–	–	–
Kentucky	6	–	4	–	–	–	24	4	–	–
Louisiana	3	–	–	–	–	–	11	10	–	–
Maine	–	–	–	–	–	–	3	–	–	–
Maryland	–	–	–	–	–	–	11	3	–	4
Massachusetts	–	10	5	–	–	–	6	4	3	–
Michigan	–	–	–	–	–	–	23	8	3	–
Minnesota	–	–	–	–	–	–	9	5	–	4
Mississippi	3	–	–	–	–	–	22	–	–	–
Missouri	–	–	–	–	–	–	41	–	3	–
Montana	3	–	–	–	–	–	6	–	–	–
Nebraska	–	–	–	–	–	–	12	–	–	–
Nevada	–	–	–	–	–	–	11	–	–	–
New Hampshire	–	–	–	–	–	–	3	–	–	–
New Jersey	–	–	–	–	–	–	16	9	–	6
New Mexico	–	–	–	–	–	–	16	–	–	–
New York (including New York City)	–	–	–	4	–	–	25	18	–	6
New York City	–	–	–	–	–	–	8	11	–	3
North Carolina	7	–	–	3	–	–	19	7	–	–
North Dakota	–	–	–	–	–	–	5	3	–	–
Ohio	–	–	–	–	–	–	22	11	4	–
Oklahoma	–	–	3	–	–	–	29	6	–	–
Oregon	9	6	–	–	–	–	9	3	–	–
Pennsylvania	–	–	–	5	–	–	35	8	4	6
South Carolina	–	–	–	–	–	–	19	7	–	–
Tennessee	11	–	3	–	–	–	23	9	3	–
Texas	3	–	13	–	5	5	99	29	–	–
Utah	–	–	5	–	–	–	8	5	–	–
Virginia	5	–	–	–	–	–	20	8	–	–
Washington	4	–	3	–	–	–	8	3	–	–
West Virginia	6	–	–	–	–	–	5	4	–	–
Wisconsin	4	–	–	–	–	–	15	9	–	3
Wyoming	–	–	–	–	–	–	9	–	–	–
Employee status										
Wage and salary workers[3]	77	32	98	38	36	38	769	270	47	46
Self-employed[4]	28	16	16	5	–	–	93	20	8	18

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Sex										
Men	105	48	107	43	37	38	835	288	54	58
Women	–	–	7	–	–	–	27	–	–	6
Age										
18 to 19 years	–	–	–	–	–	–	8	11	–	–
20 to 24 years	6	3	4	3	7	9	38	45	6	5
25 to 34 years	8	14	19	8	10	9	138	72	13	10
35 to 44 years	32	8	29	10	16	8	217	79	11	17
45 to 54 years	31	11	23	16	3	8	233	46	17	18
55 to 64 years	15	5	31	3	–	4	152	28	5	10
65 and over	11	3	7	–	–	–	74	6	–	4
Race or ethnic origin[5]										
White	84	33	101	22	29	32	648	144	35	25
Black or African American	13	–	–	15	–	–	116	34	4	20
Hispanic or Latino	4	5	4	6	7	4	79	105	13	12
American Indian or Alaskan Native	4	–	–	–	–	–	–	5	–	–
Asian, Native Hawaiian or Pacific Islander	–	–	6	–	–	–	10	–	–	5
Other races or not reported	–	–	–	–	–	–	7	–	–	–
Event or exposure										
Transportation incidents	20	36	114	30	8	5	712	85	4	18
Highway	7	–	–	20	6	–	598	36	3	18
Collision between vehicles, mobile equipment	4	–	–	4	4	–	237	14	–	10
Moving in same direction	–	–	–	–	–	–	58	8	–	–
Moving in opposite directions, oncoming	3	–	–	–	–	–	97	–	–	6
Moving in intersection	–	–	–	–	–	–	36	4	–	–
Moving and standing vehicle, mobile equipment-in roadway	–	–	–	–	–	–	23	–	–	–
Moving and standing vehicle, mobile equipment-side of road	–	–	–	–	–	–	11	–	–	–
Vehicle struck stationary object or equipment in roadway	–	–	–	–	–	–	10	–	–	–
Vehicle struck stationary object or equipment on side of road	–	–	–	–	–	–	191	–	–	6
Noncollision	–	–	–	13	–	–	147	17	–	–
Jack-knifed or overturned--no collision	–	–	–	–	–	–	124	13	–	–
Ran off highway--no collision	–	–	–	–	–	–	19	–	–	–
Nonhighway (farm, industrial premises)	10	–	–	–	–	–	12	11	–	–
Noncollision accident	8	–	–	–	–	–	10	9	–	–
Fell from and struck by vehicle, mobile equipment	–	–	–	–	–	–	–	3	–	–
Overturned	7	–	–	–	–	–	8	4	–	–
Aircraft	–	–	113	–	–	–	–	–	–	–
Worker struck by vehicle, mobile equipment	–	–	–	7	–	–	79	36	–	–
Worker struck by vehicle, mobile equipment in roadway	–	–	–	3	–	–	32	13	–	–
Worker struck by vehicle, mobile equipment on side of road	–	–	–	–	–	–	24	6	–	–
Worker struck by vehicle, mobile equipment in parking lot or non-road area	–	–	–	–	–	–	22	17	–	–
Water vehicle	–	36	–	–	–	–	–	–	–	–
Fall from ship or boat, n.e.c.	–	15	–	–	–	–	–	–	–	–
Sinking, capsized water vehicle	–	13	–	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Event or exposure - continued										
Railway	–	–	–	–	–	–	23	–	–	–
Collision between railway vehicle and other vehicle	–	–	–	–	–	–	23	–	–	–
Assaults and violent acts	–	–	–	–	–	–	30	6	–	45
Homicides	–	–	–	–	–	–	22	5	–	45
Shooting	–	–	–	–	–	–	17	4	–	37
Stabbing	–	–	–	–	–	–	–	–	–	7
Suicide, self-inflicted injury	–	–	–	–	–	–	6	–	–	–
Contact with objects and equipment	79	–	–	9	6	3	67	95	–	–
Struck by object	75	–	–	5	4	–	44	45	–	–
Struck by falling object	62	–	–	–	4	–	24	25	–	–
Struck by flying object	–	–	–	–	–	–	3	6	–	–
Struck by swinging or slipping object	5	–	–	–	–	–	–	6	–	–
Struck by rolling, sliding objects on floor or ground level	–	–	–	–	–	–	14	–	–	–
Caught in or compressed by equipment or objects	4	–	–	3	–	–	20	10	–	–
Caught in running equipment or machinery	–	–	–	–	–	–	5	4	–	–
Compressed or pinched by rolling, sliding, or shifting objects	–	–	–	–	–	–	10	–	–	–
Caught in or crushed in collapsing materials	–	–	–	–	–	–	–	40	–	–
Excavation or trenching cave-in	–	–	–	–	–	–	–	26	–	–
Caught in or crushed in collapsing structure	–	–	–	–	–	–	–	13	–	–
Falls	3	–	–	–	21	8	28	71	43	–
Fall to lower level	–	–	–	–	20	8	22	71	42	–
Fall from floor, dock, or ground level	–	–	–	–	3	–	3	6	–	–
Fall through existing floor opening	–	–	–	–	3	–	–	5	–	–
Fall from ground level to lower level	–	–	–	–	–	–	3	–	–	–
Fall from ladder	–	–	–	–	–	–	3	6	4	–
Fall from roof	–	–	–	–	4	–	–	21	35	–
Fall through existing roof opening	–	–	–	–	–	–	–	3	–	–
Fall through roof surface	–	–	–	–	–	–	–	–	4	–
Fall through skylight	–	–	–	–	3	–	–	–	–	–
Fall from roof edge	–	–	–	–	–	–	–	10	24	–
Fall from scaffold, staging	–	–	–	–	–	–	–	20	–	–
Fall from building girders or other structural steel	–	–	–	–	8	–	–	4	–	–
Fall from nonmoving vehicle	–	–	–	–	–	3	14	4	–	–
Fall to lower level, n.e.c.	–	–	–	–	–	3	–	9	–	–
Fall on same level	–	–	–	–	–	–	4	–	–	–
Fall to floor, walkway, or other surface	–	–	–	–	–	–	4	–	–	–
Exposure to harmful substances or environments	–	8	–	3	–	21	16	31	4	–
Contact with electric current	–	–	–	–	–	21	7	19	–	–
Contact with wiring, transformers, or other electrical component	–	–	–	–	–	4	–	5	–	–
Contact with overhead power lines	–	–	–	–	–	16	6	13	–	–
Contact with temperature extremes	–	–	–	3	–	–	–	4	–	–
Exposure to environmental heat	–	–	–	3	–	–	–	4	–	–
Exposure to caustic, noxious, or allergenic substances	–	–	–	–	–	–	7	5	–	–
Inhalation of substance	–	–	–	–	–	–	–	3	–	–
Ingestion of substance	–	–	–	–	–	–	5	–	–	–
Oxygen deficiency	–	6	–	–	–	–	–	3	–	–
Drowning, submersion	–	6	–	–	–	–	–	3	–	–
Fires and explosions	–	–	–	–	–	–	9	–	–	–
Fires--unintended or uncontrolled	–	–	–	–	–	–	5	–	–	–
Explosion	–	–	–	–	–	–	4	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Nature										
Traumatic injuries to bones, nerves, spinal cord	6	–	–	–	–	–	30	9	4	–
Fractures	–	–	–	–	–	–	7	–	–	–
Multiple traumatic injuries to bones, nerves, spinal cord	4	–	–	–	–	–	22	7	3	–
Open wounds	–	–	–	–	–	–	22	9	–	44
Gunshot wounds	–	–	–	–	–	–	19	5	–	37
Punctures, except bites	–	–	–	–	–	–	–	4	–	6
Burns	–	–	–	–	–	–	27	–	–	–
Heat burns, scalds	–	–	–	–	–	–	27	–	–	–
Intracranial injuries	40	–	8	12	13	3	138	83	21	3
Cerebral hemorrhages	–	–	–	–	–	–	4	–	–	–
Multiple intracranial injuries	20	–	7	6	11	–	94	58	18	–
Effects of environmental conditions	–	–	–	3	–	–	–	4	–	–
Effects of heat and light	–	–	–	3	–	–	–	4	–	–
Heat stroke	–	–	–	3	–	–	–	4	–	–
Multiple traumatic injuries and disorders	33	–	100	17	17	10	467	106	20	11
Burns and other injuries	–	–	12	–	–	–	44	–	–	–
Intracranial injuries and injuries to internal organs	15	–	26	3	4	–	142	33	8	6
Other combinations of traumatic injuries	5	–	15	3	5	–	47	16	3	–
Other traumatic injuries and disorders	23	45	4	10	6	24	175	79	5	6
Asphyxiations/strangulations, suffocations	–	–	–	–	–	–	36	13	–	–
Drownings	–	42	–	–	–	–	5	7	–	–
Electrocutions, electric shocks	–	–	–	–	–	21	7	19	–	–
Internal injuries to organs and blood vessels of the trunk	20	–	–	8	–	–	105	35	–	5
Other poisonings and toxic effects	–	–	–	–	–	–	21	5	–	–
Other poisonings and toxic effects, n.e.c.	–	–	–	–	–	–	21	4	–	–
Primary source[6]										
Vehicles	14	39	114	33	10	6	739	75	4	18
Air vehicle	–	–	113	–	–	–	–	–	–	–
Aircraft--powered fixed wing	–	–	76	–	–	–	–	–	–	–
Jet	–	–	7	–	–	–	–	–	–	–
Propeller-driven aircraft	–	–	59	–	–	–	–	–	–	–
Aircraft--powered rotary wing	–	–	27	–	–	–	–	–	–	–
Helicopter	–	–	26	–	–	–	–	–	–	–
Highway vehicle, motorized	13	–	–	32	8	5	730	62	3	18
Automobile	–	–	–	–	–	–	31	14	–	11
Truck	13	–	–	31	7	4	670	40	–	–
Delivery truck	–	–	–	–	–	–	49	–	–	–
Dump truck	–	–	–	7	–	–	47	4	–	–
Pickup truck	3	–	–	–	4	–	38	23	–	–
Semitrailer, tractor trailer, trailer truck	5	–	–	–	–	–	452	–	–	–
Van--passenger or light delivery	–	–	–	–	–	–	23	5	–	5
Plant and industrial powered vehicles, tractors	–	–	–	–	–	–	6	10	–	–
Forklift	–	–	–	–	–	–	5	8	–	–
Water vehicle	–	39	–	–	–	–	–	–	–	–
Tugboat, commercial fishing boat	–	35	–	–	–	–	–	–	–	–
Structures and surfaces	–	–	–	–	20	10	30	102	43	–
Floors, walkways, ground surfaces	–	–	–	–	17	8	27	77	42	–
Floors	–	–	–	–	5	–	4	24	6	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Primary source[6] - continued										
Ground	–	–	–	–	10	8	8	28	24	–
Sidewalks, paths, outdoor walkways	–	–	–	–	–	–	–	–	3	–
Street, road	–	–	–	–	–	–	–	3	–	–
Surfaces below ground level, n.e.c.	–	–	–	–	–	–	–	12	–	–
Ditches, channels, trenches, excavations	–	–	–	–	–	–	–	12	–	–
Parking lots	–	–	–	–	–	–	6	–	–	–
Other floors, walkways, ground surfaces	–	–	–	–	–	–	3	–	–	–
Other structural elements	–	–	–	–	–	–	–	12	–	–
Roof	–	–	–	–	–	–	–	4	–	–
Walls	–	–	–	–	–	–	–	6	–	–
Structures	–	–	–	–	–	–	–	13	–	–
Buildings--office, plant, residential	–	–	–	–	–	–	–	5	–	–
Scaffolds, staging	–	–	–	–	–	–	–	4	–	–
Machinery	11	–	–	–	3	4	19	36	–	–
Construction, logging, and mining machinery	11	–	–	–	–	–	12	26	–	–
Excavating machinery	–	–	–	–	–	–	4	15	–	–
Backhoes	–	–	–	–	–	–	–	12	–	–
Loaders	–	–	–	–	–	–	5	6	–	–
Front end loaders	–	–	–	–	–	–	3	3	–	–
Logging and wood processing machinery--specialized	10	–	–	–	–	–	–	–	–	–
Log loaders, including heel boom	3	–	–	–	–	–	–	–	–	–
Skidder--cable and grapple	3	–	–	–	–	–	–	–	–	–
Road grading and surfacing machinery	–	–	–	–	–	–	–	4	–	–
Material handling (cranes, conveyers, jacks)	–	–	–	–	3	–	6	8	–	–
Cranes	–	–	–	–	–	–	3	6	–	–
Cranes--mobile, truck, rail mounted	–	–	–	–	–	–	–	3	–	–
Parts and materials	–	–	–	–	4	16	18	36	–	–
Building materials--solid elements	–	–	–	–	3	–	10	21	–	–
Bricks, blocks, structural stone	–	–	–	–	–	–	–	3	–	–
Pipes, ducts, tubing	–	–	–	–	–	–	6	7	–	–
Structural metal materials	–	–	–	–	3	–	–	5	–	–
Wood, lumber	–	–	–	–	–	–	3	–	–	–
Other building materials--solid elements	–	–	–	–	–	–	–	4	–	–
Fasteners, connectors, ropes, ties	–	–	–	–	–	–	–	3	–	–
Machine, tool, and electrical parts	–	–	–	–	–	16	–	8	–	–
Electric parts	–	–	–	–	–	16	–	7	–	–
Power lines, transformers, convertors	–	–	–	–	–	16	–	4	–	–
Vehicle and mobile equipment parts	–	–	–	–	–	–	3	3	–	–
Persons, plants, animals, and minerals	74	–	–	–	–	–	3	17	–	–
Nonmetallic minerals, except fuel	–	–	–	–	–	–	–	13	–	–
Dirt, earth	–	–	–	–	–	–	–	11	–	–
Plants, trees, vegetation--not processed	73	–	–	–	–	–	–	3	–	–
Trees, logs	73	–	–	–	–	–	–	3	–	–
Chemicals and chemical products	–	–	–	–	–	–	9	4	–	–
Chemical products--general	–	–	–	–	–	–	8	–	–	–
Drugs, alcohol, medicines	–	–	–	–	–	–	7	–	–	–
Tools, instruments, and equipment	–	–	–	–	–	–	–	–	–	7
Handtools--nonpowered	–	–	–	–	–	–	–	–	–	6
Cutting handtools	–	–	–	–	–	–	–	–	–	6
Knives	–	–	–	–	–	–	–	–	–	5
Containers	–	–	–	3	–	–	10	3	–	–
Containers-nonpressurized	–	–	–	–	–	–	4	–	–	–
Containers-variable restraint	–	–	–	–	–	–	4	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Primary source[6] - continued										
Other	–	7	–	3	–	–	32	15	3	37
Ammunition	–	–	–	–	–	–	20	5	–	37
Bullets	–	–	–	–	–	–	17	5	–	36
Atmospheric and environmental conditions	–	–	–	3	–	–	6	5	–	–
Fire, flame, smoke	–	–	–	–	–	–	6	–	–	–
Fire, flame	–	–	–	–	–	–	6	–	–	–
Temperature extreme	–	–	–	3	–	–	–	4	–	–
Heat--environmental	–	–	–	3	–	–	–	4	–	–
Steam, vapors, liquids	–	6	–	–	–	–	–	4	–	–
Liquids	–	6	–	–	–	–	–	4	–	–
Water	–	6	–	–	–	–	–	4	–	–
Secondary source[7]										
Vehicles	6	–	4	11	5	–	332	25	–	10
Air vehicle	–	–	3	–	–	–	–	–	–	–
Aircraft--powered fixed wing	–	–	3	–	–	–	–	–	–	–
Propeller-driven aircraft	–	–	3	–	–	–	–	–	–	–
Highway vehicle, motorized	5	–	–	10	5	–	301	24	–	10
Automobile	–	–	–	–	–	–	36	9	–	9
Truck	3	–	–	7	5	–	241	14	–	–
Delivery truck	–	–	–	–	–	–	7	–	–	–
Dump truck	–	–	–	–	–	–	13	–	–	–
Pickup truck	–	–	–	–	–	–	36	3	–	–
Semitrailer, tractor trailer, trailer truck	–	–	–	–	4	–	153	4	–	–
Van--passenger or light delivery	–	–	–	–	–	–	9	–	–	–
Plant and industrial powered vehicles, tractors	–	–	–	–	–	–	5	–	–	–
Forklift	–	–	–	–	–	–	4	–	–	–
Rail vehicle	–	–	–	–	–	–	24	–	–	–
Train	–	–	–	–	–	–	24	–	–	–
Structures and surfaces	–	–	46	5	15	7	160	68	34	3
Floors, walkways, ground surfaces	–	–	39	4	3	–	14	16	–	–
Floors	–	–	–	–	3	–	–	6	–	–
Ground	–	–	39	–	–	–	6	3	–	–
Surfaces below ground level, n.e.c.	–	–	–	–	–	–	3	4	–	–
Ditches, channels, trenches, excavations	–	–	–	–	–	–	3	4	–	–
Other structural elements	–	–	–	–	5	–	8	25	31	–
Fences, fence panels	–	–	–	–	–	–	3	–	–	–
Roof	–	–	–	–	–	–	–	16	30	–
Walls	–	–	–	–	–	–	5	3	–	–
Structures	–	–	4	–	7	6	138	27	–	–
Bridges, dams, locks	–	–	–	–	–	–	26	–	–	–
Buildings--office, plant, residential	–	–	–	–	–	–	4	–	–	–
Scaffolds, staging	–	–	–	–	–	–	–	20	–	–
Towers, poles	–	–	–	–	–	6	17	–	–	–
Other structures	–	–	–	–	–	–	89	–	–	–
Guardrails, road dividers	–	–	–	–	–	–	82	–	–	–
Machinery	7	–	–	–	5	3	3	25	–	–
Construction, logging, and mining machinery	7	–	–	–	–	–	–	12	–	–
Excavating machinery	–	–	–	–	–	–	–	11	–	–
Backhoes	–	–	–	–	–	–	–	7	–	–
Logging and wood processing machinery--specialized	6	–	–	–	–	–	–	–	–	–
Log loaders, including heel boom	3	–	–	–	–	–	–	–	–	–
Material handling (cranes, conveyers, jacks)	–	–	–	–	5	3	–	13	–	–
Cranes	–	–	–	–	–	–	–	4	–	–
Elevators	–	–	–	–	–	3	–	7	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Secondary source[7] - continued										
Bucket or basket hoist--truck mounted	–	–	–	–	–	3	–	–	–	–
Manlifts	–	–	–	–	–	–	–	5	–	–
Parts and materials	–	5	4	–	6	6	15	21	4	–
Building materials--solid elements	–	–	–	–	4	–	–	6	–	–
Structural metal materials	–	–	–	–	3	–	–	–	–	–
Machine, tool, and electrical parts	–	–	3	–	–	6	7	12	–	–
Electric parts	–	–	3	–	–	5	7	12	–	–
Electrical wiring	–	–	–	–	–	–	–	3	–	–
Power lines, transformers, convertors	–	–	3	–	–	5	6	9	–	–
Vehicle and mobile equipment parts	–	–	–	–	–	–	5	–	–	–
Tires, inner tubes, wheels	–	–	–	–	–	–	3	–	–	–
Persons, plants, animals, and minerals	25	–	10	–	–	–	81	8	–	46
Nonmetallic minerals, except fuel	–	–	–	–	–	–	4	–	–	–
Person--other than injured or ill worker	–	–	–	–	–	–	22	6	–	44
Robber	–	–	–	–	–	–	11	–	–	26
Plants, trees, vegetation--not processed	25	–	9	–	–	–	53	–	–	–
Trees, logs	25	–	9	–	–	–	53	–	–	–
Chemicals and chemical products	–	–	–	–	–	–	6	–	–	–
Coal, natural gas, petroleum fuels and products	–	–	–	–	–	–	4	–	–	–
Petroleum fuels, distillates, products, unspecified	–	–	–	–	–	–	4	–	–	–
Gasoline, diesel fuel, jet fuel	–	–	–	–	–	–	4	–	–	–
Tools, instruments, and equipment	4	–	–	–	–	–	7	9	6	–
Handtools--powered	4	–	–	–	–	–	–	3	–	–
Cutting handtools	4	–	–	–	–	–	–	–	–	–
Chainsaws	4	–	–	–	–	–	–	–	–	–
Ladders	–	–	–	–	–	–	3	4	6	–
Ladders--movable	–	–	–	–	–	–	3	4	5	–
Extension ladders	–	–	–	–	–	–	–	3	–	–
Containers	–	–	–	–	–	–	7	3	–	–
Containers-nonpressurized	–	–	–	–	–	–	6	–	–	–
Tanks, bins, vats	–	–	–	–	–	–	6	–	–	–
Containers-pressurized	–	–	–	–	–	–	–	3	–	–
Other	3	23	14	–	–	–	15	10	–	–
Atmospheric and environmental conditions	3	–	–	–	–	–	9	4	–	–
Fire, flame, smoke	–	–	–	–	–	–	3	–	–	–
Fire, flame	–	–	–	–	–	–	3	–	–	–
Weather and atmospheric conditions	3	–	–	–	–	–	6	3	–	–
Ice, sleet, snow	–	–	–	–	–	–	3	–	–	–
Steam, vapors, liquids	–	22	13	–	–	–	–	4	–	–
Liquids	–	22	13	–	–	–	–	4	–	–
Water	–	22	13	–	–	–	–	4	–	–
Not reported	58	15	36	23	3	18	236	121	5	–
Worker activity										
Vehicular and transportation operations	18	41	114	33	8	5	716	73	5	59
Driving, operating	14	12	97	4	4	–	615	36	4	40
Automobile	–	–	–	–	–	–	16	5	–	33
Airplane	–	–	96	–	–	–	–	–	–	–
Truck	9	–	–	3	–	–	568	16	–	–
Industrial or construction vehicle	4	–	–	–	–	–	5	12	–	–
Boat	–	12	–	–	–	–	–	–	–	–
Bicycle, motorcycle	–	–	–	–	–	–	3	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Worker activity - continued										
Riding in, on	–	28	17	19	–	–	29	14	–	–
Airplane	–	–	17	–	–	–	–	–	–	–
Truck	–	–	–	19	–	–	27	11	–	–
Boat	–	28	–	–	–	–	–	–	–	–
Boarding, alighting	–	–	–	3	–	–	15	–	–	–
Resurfacing, blacktopping, etc.	–	–	–	–	–	–	–	5	–	–
Directing, flagging traffic	–	–	–	–	–	–	4	6	–	–
Walking in or near roadway, etc., n.e.c.	–	–	–	6	–	–	41	9	–	–
Vehicular and transportation operations, n.e.c.	–	–	–	–	–	–	7	–	–	–
Using or operating tools, machinery	79	–	–	–	–	3	9	10	–	–
Operating heavy equipment	4	–	–	–	–	–	7	3	–	–
Materials handling machinery	–	–	–	–	–	–	5	–	–	–
Operating machinery	3	–	–	–	–	–	–	–	–	–
Using power tools	10	–	–	–	–	–	–	–	–	–
Using nonpowered hand tools	–	–	–	–	–	–	–	3	–	–
Logging, trimming, pruning	62	–	–	–	–	–	–	–	–	–
Constructing, repairing, cleaning	–	–	–	–	25	24	29	161	39	–
Construction, assembling, dismantling	–	–	–	–	20	11	6	115	23	–
Constructing, assembling	–	–	–	–	8	–	–	31	4	–
Installing	–	–	–	–	8	8	3	36	11	–
Dismantling, removing	–	–	–	–	–	–	3	22	3	–
Repair, maintenance	–	–	–	–	–	13	12	24	9	–
Repairing	–	–	–	–	–	8	7	12	6	–
Inspecting or checking	–	–	–	–	–	–	6	–	–	–
Cleaning, washing	–	–	–	–	–	–	4	8	–	–
Materials handling operations	–	–	–	7	–	–	45	25	–	–
Loading, unloading (packing, unpacking) materials	–	–	–	–	–	–	34	8	–	–
Materials handling, n.e.c.	–	–	–	3	–	–	6	12	–	–
Physical activity[8], n.e.c.	3	5	–	–	–	6	46	18	5	–
All other activities	3	–	–	–	–	–	17	3	4	–
Activity, n.e.c.	3	–	–	–	–	–	13	3	4	–
Location										
Street or highway	12	–	5	32	9	19	709	87	4	58
Street and highway, unspecified	–	–	–	–	–	–	20	–	–	–
Interstate, freeway, or expressway	–	–	–	–	4	–	278	10	–	–
Other highway (State or U.S.)	4	–	–	3	–	3	233	16	–	3
Local road or street	5	–	–	25	–	14	142	15	–	52
Road construction[9]	–	–	–	–	–	–	9	44	–	–
Industrial place or premise	3	–	4	3	25	11	74	131	18	–
Dockyard	–	–	–	–	–	–	4	–	–	–
Loading platform, factory or store	–	–	–	–	–	–	15	–	–	–
Warehouse	–	–	–	–	–	–	3	4	5	–
Construction site	–	–	–	–	24	7	12	115	11	–
Factory, plant	–	–	–	–	–	–	8	5	–	–
Industrial place or premises, nec	–	–	–	–	–	–	12	–	–	–
Other specified place[10]	83	46	81	4	–	–	48	4	–	3
Parking lot, garage (employer's premises)	–	–	–	–	–	–	14	–	–	–
Parking lot, garage (except employer's premises)	–	–	–	–	–	–	29	–	–	–
River	–	5	6	–	–	–	–	–	–	–
Sea	–	41	12	–	–	–	–	–	–	–
Woods	83	–	20	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Location - continued										
Public building[11]	–	–	–	–	–	–	8	4	4	–
Shop, commercial, store, (except grocery)	–	–	–	–	–	–	3	–	–	–
Farm	5	–	21	–	–	–	6	–	–	–
Farm land under cultivation, fields, meadows	–	–	19	–	–	–	–	–	–	–
Private residence[12]	–	–	–	3	–	3	4	61	28	–
Residential construction[13]	–	–	–	–	–	–	3	47	22	–
Mine, quarry	–	–	–	–	–	–	9	–	–	–
Unspecified place	–	–	–	–	–	–	3	–	–	–
Industry (NAICS)[14]										
Private industry	103	47	109	31	36	36	841	282	55	64
Goods producing	99	46	13	–	36	21	128	272	53	–
Natural resources and mining	98	46	11	–	–	–	37	–	–	–
Agriculture, forestry, fishing and hunting	98	46	11	–	–	–	20	–	–	–
Crop production	–	–	–	–	–	–	6	–	–	–
Other crop farming	–	–	–	–	–	–	3	–	–	–
Animal production	–	–	–	–	–	–	6	–	–	–
Cattle ranching and farming	–	–	–	–	–	–	3	–	–	–
Dairy cattle and milk production	–	–	–	–	–	–	3	–	–	–
Forestry and logging	98	–	–	–	–	–	7	–	–	–
Logging	97	–	–	–	–	–	7	–	–	–
Logging	97	–	–	–	–	–	7	–	–	–
Fishing, hunting and trapping	–	46	–	–	–	–	–	–	–	–
Fishing	–	46	–	–	–	–	–	–	–	–
Fishing	–	46	–	–	–	–	–	–	–	–
Finfish fishing	–	8	–	–	–	–	–	–	–	–
Shellfish fishing	–	21	–	–	–	–	–	–	–	–
Support activities for agriculture and forestry	–	–	9	–	–	–	–	–	–	–
Support activities for crop production	–	–	6	–	–	–	–	–	–	–
Support activities for crop production	–	–	6	–	–	–	–	–	–	–
Soil preparation, planting, and cultivating	–	–	5	–	–	–	–	–	–	–
Mining	–	–	–	–	–	–	17	–	–	–
Mining (except oil and gas)	–	–	–	–	–	–	6	–	–	–
Coal mining	–	–	–	–	–	–	4	–	–	–
Coal mining	–	–	–	–	–	–	4	–	–	–
Support activities for mining	–	–	–	–	–	–	11	–	–	–
Support activities for mining	–	–	–	–	–	–	11	–	–	–
Support activities for mining	–	–	–	–	–	–	11	–	–	–
Support activities for oil and gas operations	–	–	–	–	–	–	10	–	–	–
Construction	–	–	–	–	36	21	42	270	53	–
Construction	–	–	–	–	36	21	42	270	53	–
Construction of buildings	–	–	–	–	3	–	–	78	4	–
Residential building construction	–	–	–	–	–	–	–	46	–	–
Residential building construction	–	–	–	–	–	–	–	46	–	–
New single-family housing construction (except operative builders)	–	–	–	–	–	–	–	13	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Industry (NAICS)[14] - continued										
New mult if amily housing construction (except operative builders)	–	–	–	–	–	–	–	5	–	–
Residential remodelers	–	–	–	–	–	–	–	12	–	–
Nonresidential building construction	–	–	–	–	3	–	–	27	–	–
Industrial building construction	–	–	–	–	–	–	–	6	–	–
Commercial and institutional building construction	–	–	–	–	3	–	–	17	–	–
Heavy and civil engineering construction	–	–	–	–	6	18	12	81	–	–
Utility system construction	–	–	–	–	–	18	5	41	–	–
Water and sewer line and related structures construction	–	–	–	–	–	–	–	31	–	–
Oil and gas pipeline and related structures construction	–	–	–	–	–	–	3	6	–	–
Power and communication line and related structures construction	–	–	–	–	–	17	–	4	–	–
Highway, street, and bridge construction	–	–	–	–	–	–	7	37	–	–
Highway, street, and bridge construction	–	–	–	–	–	–	7	37	–	–
Specialty trade contractors	–	–	–	–	26	3	26	98	49	–
Foundation, structure, and building exterior contractors	–	–	–	–	24	–	9	37	49	–
Poured concrete foundation and structure contractors	–	–	–	–	–	–	4	6	–	–
Structural steel and precast concrete contractors	–	–	–	–	24	–	–	5	–	–
Nonresidential structural steel and precast concrete contractors	–	–	–	–	14	–	–	4	–	–
Framing contractors	–	–	–	–	–	–	–	5	–	–
Residential framing contractors	–	–	–	–	–	–	–	3	–	–
Masonry contractors	–	–	–	–	–	–	3	10	–	–
Nonresidential masonry contractors	–	–	–	–	–	–	–	5	–	–
Roofing contractors	–	–	–	–	–	–	–	7	47	–
Residential roofing contractors	–	–	–	–	–	–	–	–	16	–
Nonresidential roofing contractors	–	–	–	–	–	–	–	–	8	–
Siding contractors	–	–	–	–	–	–	–	3	–	–
Building equipment contractors	–	–	–	–	–	3	–	8	–	–
Electrical contractors	–	–	–	–	–	3	–	3	–	–
Plumbing, heating, and air-conditioning contractors	–	–	–	–	–	–	–	4	–	–
Building finishing contractors	–	–	–	–	–	–	–	9	–	–
Drywall and insulation contractors	–	–	–	–	–	–	–	4	–	–
Other specialty trade contractors	–	–	–	–	–	–	14	42	–	–
Site preparation contractors	–	–	–	–	–	–	9	26	–	–
Residential site preparation contractors	–	–	–	–	–	–	–	4	–	–
Nonresidential site preparation contractors	–	–	–	–	–	–	5	13	–	–
All other specialty trade contractors	–	–	–	–	–	–	5	16	–	–
Residential all other specialty trade contractors	–	–	–	–	–	–	–	7	–	–
Nonresidential all other specialty trade contractors	–	–	–	–	–	–	–	4	–	–
Manufacturing	–	–	–	–	–	–	49	–	–	–
Manufacturing	–	–	–	–	–	–	49	–	–	–
Food manufacturing	–	–	–	–	–	–	12	–	–	–
Dairy product manufacturing	–	–	–	–	–	–	3	–	–	–
Animal slaughtering and processing	–	–	–	–	–	–	3	–	–	–
Animal slaughtering and processing	–	–	–	–	–	–	3	–	–	–
Poultry processing	–	–	–	–	–	–	3	–	–	–
Bakeries and tortilla manufacturing	–	–	–	–	–	–	5	–	–	–
Bread and bakery product manufacturing	–	–	–	–	–	–	3	–	–	–
Commercial bakeries	–	–	–	–	–	–	3	–	–	–
Beverage and tobacco product manufacturing	–	–	–	–	–	–	4	–	–	–
Beverage manufacturing	–	–	–	–	–	–	4	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Industry (NAICS)[14] - continued										
Soft drink and ice manufacturing	–	–	–	–	–	–	4	–	–	–
Soft drink manufacturing	–	–	–	–	–	–	4	–	–	–
Wood product manufacturing	–	–	–	–	–	–	5	–	–	–
Other wood product manufacturing	–	–	–	–	–	–	3	–	–	–
Plastics and rubber products manufacturing	–	–	–	–	–	–	3	–	–	–
Nonmetallic mineral product manufacturing	–	–	–	–	–	–	16	–	–	–
Cement and concrete product manufacturing	–	–	–	–	–	–	16	–	–	–
Ready-mix concrete manufacturing	–	–	–	–	–	–	15	–	–	–
Service-Providing	4	–	96	31	–	15	713	10	–	64
Trade, transportation, and utilities	3	–	60	–	–	13	637	4	–	60
Wholesale trade	–	–	–	–	–	–	61	–	–	–
Merchant wholesalers, durable goods	–	–	–	–	–	–	20	–	–	–
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	–	–	–	–	–	–	5	–	–	–
Lumber and other construction materials merchant wholesalers	–	–	–	–	–	–	4	–	–	–
Miscellaneous durable goods merchant wholesalers	–	–	–	–	–	–	9	–	–	–
Recyclable material merchant wholesalers	–	–	–	–	–	–	7	–	–	–
Merchant wholesalers, nondurable goods	–	–	–	–	–	–	39	–	–	–
Grocery and related product wholesalers	–	–	–	–	–	–	14	–	–	–
General line grocery merchant wholesalers	–	–	–	–	–	–	4	–	–	–
Packaged frozen food merchant wholesalers	–	–	–	–	–	–	4	–	–	–
Other grocery and related products merchant wholesalers	–	–	–	–	–	–	4	–	–	–
Petroleum and petroleum products merchant wholesalers	–	–	–	–	–	–	14	–	–	–
Petroleum and petroleum products merchant wholesalers (except bulk stations and terminals)	–	–	–	–	–	–	12	–	–	–
Miscellaneous nondurable goods merchant wholesalers	–	–	–	–	–	–	8	–	–	–
Farm supplies merchant wholesalers	–	–	–	–	–	–	4	–	–	–
Retail trade	–	–	–	–	–	–	35	–	–	–
Motor vehicle and parts dealers	–	–	–	–	–	–	8	–	–	–
Automotive parts, accessories, and tire stores	–	–	–	–	–	–	6	–	–	–
Automotive parts and accessories stores	–	–	–	–	–	–	6	–	–	–
Building material and garden equipment and supplies dealers	–	–	–	–	–	–	5	–	–	–
Building material and supplies dealers	–	–	–	–	–	–	5	–	–	–
Other building material dealers	–	–	–	–	–	–	4	–	–	–
Health and personal care stores	–	–	–	–	–	–	3	–	–	–
Health and personal care stores	–	–	–	–	–	–	3	–	–	–
Gasoline stations	–	–	–	–	–	–	3	–	–	–
Gasoline stations	–	–	–	–	–	–	3	–	–	–
Gasoline stations with convenience stores	–	–	–	–	–	–	3	–	–	–
Miscellaneous store retailers	–	–	–	–	–	–	3	–	–	–
Florists	–	–	–	–	–	–	3	–	–	–
Florists	–	–	–	–	–	–	3	–	–	–
Nonstore retailers	–	–	–	–	–	–	10	–	–	–
Direct selling establishments	–	–	–	–	–	–	10	–	–	–
Fuel dealers	–	–	–	–	–	–	10	–	–	–
Heating oil dealers	–	–	–	–	–	–	5	–	–	–
Liquefied petroleum gas (bottled gas) dealers	–	–	–	–	–	–	3	–	–	–
Transportation and warehousing	–	–	60	–	–	–	539	–	–	60
Air transportation	–	–	49	–	–	–	–	–	–	–
Scheduled air transportation	–	–	11	–	–	–	–	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Industry (NAICS)[14] - continued										
Scheduled air transportation	–	–	11	–	–	–	–	–	–	–
Scheduled passenger air transportation	–	–	6	–	–	–	–	–	–	–
Nonscheduled air transportation	–	–	38	–	–	–	–	–	–	–
Nonscheduled air transportation	–	–	38	–	–	–	–	–	–	–
Nonscheduled chartered passenger air transportation	–	–	21	–	–	–	–	–	–	–
Nonscheduled chartered freight air transportation	–	–	7	–	–	–	–	–	–	–
Other nonscheduled air transportation	–	–	7	–	–	–	–	–	–	–
Truck transportation	–	–	–	–	–	–	494	–	–	–
General freight trucking	–	–	–	–	–	–	348	–	–	–
General freight trucking, local	–	–	–	–	–	–	37	–	–	–
General freight trucking, long-distance	–	–	–	–	–	–	284	–	–	–
General freight trucking, long-distance, truckload	–	–	–	–	–	–	205	–	–	–
General freight trucking, long-distance, less than truckload	–	–	–	–	–	–	34	–	–	–
Specialized freight trucking	–	–	–	–	–	–	120	–	–	–
Used household and office goods moving	–	–	–	–	–	–	6	–	–	–
Specialized freight (except used goods) trucking, local	–	–	–	–	–	–	65	–	–	–
Specialized freight (except used goods) trucking, long-distance	–	–	–	–	–	–	46	–	–	–
Transit and ground passenger transportation	–	–	–	–	–	–	–	–	–	59
Taxi and limousine service	–	–	–	–	–	–	–	–	–	56
Taxi service	–	–	–	–	–	–	–	–	–	54
Other transit and ground passenger transportation	–	–	–	–	–	–	–	–	–	3
Other transit and ground passenger transportation	–	–	–	–	–	–	–	–	–	3
Scenic and sightseeing transportation	–	–	5	–	–	–	–	–	–	–
Scenic and sightseeing transportation, other	–	–	5	–	–	–	–	–	–	–
Scenic and sightseeing transportation, other	–	–	5	–	–	–	–	–	–	–
Support activities for transportation	–	–	5	–	–	–	29	–	–	–
Support activities for air transportation	–	–	5	–	–	–	–	–	–	–
Other support activities for air transportation	–	–	5	–	–	–	–	–	–	–
Support activities for road transportation	–	–	–	–	–	–	29	–	–	–
Motor vehicle towing	–	–	–	–	–	–	22	–	–	–
Other support activities for road transportation	–	–	–	–	–	–	7	–	–	–
Couriers and messengers	–	–	–	–	–	–	14	–	–	–
Couriers	–	–	–	–	–	–	12	–	–	–
Couriers	–	–	–	–	–	–	12	–	–	–
Utilities	–	–	–	–	–	13	–	–	–	–
Utilities	–	–	–	–	–	13	–	–	–	–
Electric power generation, transmission and distribution	–	–	–	–	–	12	–	–	–	–
Electric power generation	–	–	–	–	–	3	–	–	–	–
Electric power transmission, control, and distribution	–	–	–	–	–	9	–	–	–	–
Electric power distribution	–	–	–	–	–	6	–	–	–	–
Information	–	–	–	–	–	–	12	–	–	–
Information	–	–	–	–	–	–	12	–	–	–
Publishing industries (except internet)	–	–	–	–	–	–	12	–	–	–
Newspaper, periodical, book, and directory publishers	–	–	–	–	–	–	12	–	–	–
Newspaper publishers	–	–	–	–	–	–	12	–	–	–
Financial activities	–	–	–	–	–	–	9	–	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Industry (NAICS)[14] - continued										
Real estate and rental and leasing	–	–	–	–	–	–	9	–	–	–
Rental and leasing services	–	–	–	–	–	–	9	–	–	–
Commercial and industrial machinery and equipment rental and leasing	–	–	–	–	–	–	3	–	–	–
Professional and business services	–	–	–	29	–	–	35	4	–	–
Administrative and waste services	–	–	–	29	–	–	34	4	–	–
Administrative and support services	–	–	–	–	–	–	–	4	–	–
Employment services	–	–	–	–	–	–	–	4	–	–
Temporary help services	–	–	–	–	–	–	–	3	–	–
Waste management and remediation services	–	–	–	28	–	–	32	–	–	–
Waste collection	–	–	–	28	–	–	22	–	–	–
Waste collection	–	–	–	28	–	–	22	–	–	–
Solid waste collection	–	–	–	24	–	–	19	–	–	–
Waste treatment and disposal	–	–	–	–	–	–	3	–	–	–
Waste treatment and disposal	–	–	–	–	–	–	3	–	–	–
Remediation and other waste management services	–	–	–	–	–	–	6	–	–	–
All other waste management services	–	–	–	–	–	–	4	–	–	–
Septic tank and related services	–	–	–	–	–	–	4	–	–	–
Educational and health services	–	–	26	–	–	–	–	–	–	–
Educational services	–	–	23	–	–	–	–	–	–	–
Educational services	–	–	23	–	–	–	–	–	–	–
Technical and trade schools	–	–	23	–	–	–	–	–	–	–
Technical and trade schools	–	–	23	–	–	–	–	–	–	–
Flight training	–	–	23	–	–	–	–	–	–	–
Health care and social assistance	–	–	3	–	–	–	–	–	–	–
Leisure and hospitality	–	–	5	–	–	–	15	–	–	–
Arts, entertainment, and recreation	–	–	5	–	–	–	–	–	–	–
Accommodation and food services	–	–	–	–	–	–	15	–	–	–
Food services and drinking places	–	–	–	–	–	–	15	–	–	–
Limited-service eating places	–	–	–	–	–	–	12	–	–	–
Limited-service eating places	–	–	–	–	–	–	12	–	–	–
Limited-service restaurants	–	–	–	–	–	–	10	–	–	–
Other services, except public administration	–	–	–	–	–	–	4	–	–	–
Other services, except public administration	–	–	–	–	–	–	4	–	–	–
Personal and laundry services	–	–	–	–	–	–	3	–	–	–
Government[15]	–	–	5	12	–	–	21	8	–	–
Local government	–	–	–	11	–	–	18	6	–	–
Goods producing	–	–	–	–	–	–	5	6	–	–
Construction	–	–	–	–	–	–	5	6	–	–
Construction	–	–	–	–	–	–	5	6	–	–
Heavy and civil engineering construction	–	–	–	–	–	–	5	6	–	–
Highway, street, and bridge construction	–	–	–	–	–	–	5	6	–	–
Highway, street, and bridge construction	–	–	–	–	–	–	5	6	–	–

See footnotes at end of table.

TABLE D-1. **Fatal occupational injuries by occupations with the highest fatality rates by selected characteristics, 2003 — Continued**

Characteristics	Occupation[1]									
	Logging workers	Fishers and related fishing workers	Aircraft pilots and flight engineers	Refuse and recyclable material collec-tors	Structural iron and steel workers	Electrical powerline installers and repairers	Driver/ sales workers and truck drivers	Con-struction laborers	Roofers	Taxi drivers and chauf-feurs
Industry (NAICS)[14] - continued										
Service-Providing	–	–	–	11	–	–	13	–	–	–
Professional and business services	–	–	–	9	–	–	6	–	–	–
Administrative and waste services	–	–	–	9	–	–	6	–	–	–
Waste management and remediation services	–	–	–	9	–	–	6	–	–	–
Waste collection	–	–	–	7	–	–	6	–	–	–
Waste collection	–	–	–	7	–	–	6	–	–	–
Solid waste collection	–	–	–	7	–	–	6	–	–	–
Public administration	–	–	–	–	–	–	4	–	–	–
Public administration	–	–	–	–	–	–	4	–	–	–
Executive, legislative, and other general government support	–	–	–	–	–	–	3	–	–	–
Executive, legislative, and other general government support	–	–	–	–	–	–	3	–	–	–

[1] Based on the 2000 Standard Occupational Classification System.
[2] The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: (N/W) x 100,000, where N = the number of fatal work injuries, and W = the number of employed workers based on Current Population Survey and Department of Defense figures. Fatalities to workers under the age of 16 years were not included in the rate calculations to maintain consistency with CPS employment figures.
[3] May include volunteers and other workers receiving compensation.
[4] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[5] Persons identified as Hispanic may be of any race. The individual racial categories shown exclude data for Hispanics.
[6] The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.
[7] The secondary source of injury, if any, identifies the object, substance, or person that generated the source of injury or that contributed to the event or exposure. For vehicle collisions, the deceased's vehicle is the primary source and the other object (truck, road, divider, etc.) is the secondary source. For most homicides, the "bullet" is the primary source and the "perpetrator" is the secondary source. The category "Robber" is a newly instituted code beginning with 1997 data.
[8] Includes the category "Bodily reaction and exertion."
[9] The road construction location category was implemented in 1995.
[10] Primarily includes outdoor areas such as bodies of water, woods, noncultivated fields, and parking lots.
[11] Buildings and adjacent grounds used by the general public or a particular group, such as hotels, restaurants, stores, office buildings, courthouses, and schools.
[12] Private residence fatalities primarily occurred to repair or maintenance workers, police while on duty, firefighters, or residential construction workers.
[13] The residential construction location category was implemented in 1998.
[14] Classified according to the North American Industry Classification System, 2002.
[15] Includes fatalities to workers employed by governmental organizations regardless of industry. Dashes indicate no data reported or data that do not meet publication criteria.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

Appendix E. Years of Potential Life Lost

In CFOI, years of potential life lost (YPLL) measures the number of years of potential life a person loses when he or she incurs a fatal occupational injury. The YPLL of a decedent is determined by that decedent's life expectancy and age at death. YPLL can be calculated for demographic characteristics like age, race, and gender as well as for other categories such as event, occupation, and industry.

The YPLL equation is:

$$\mathbf{YPLL_X = LE_X - AD_X}$$

where

$YPLL_X$ = years of potential life lost for Person X,

LE_X = life expectancy for Person X,

and

AD_X = age at death for Person X

The years of potential life lost for Person X is the life expectancy of the individual minus the age at which the individual dies. This YPLL analysis uses variable life expectancies based on demographic characteristics. Each decedent in the data set was assigned a specific life expectancy number based on four factors - (1) the decedent's race, (2) the decedent's gender, (3) the decedent's age at death, and (4) the year in which the decedent died. These life expectancy figures were taken from the National Center for Health Statistics (NCHS), which is part of the Centers for Disease Control and Prevention (CDC). The age at death was taken from CFOI.

To calculate YPLL, for example, for a 45 year old white female who incurred a workplace fatality in 2002, use the following steps. Use the Life Tables from the NCHS (available online at the following address:

http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_06.pdf - see Table 6 for white females), to find that the life expectancy of a 45 year old white female in 2002 was 81.9 years. Subtract the age at death, 45 years, from the life expectancy, 81.9 years. The difference is the years of potential life this decedent lost when she died, which in this case is 36.9 years.

A similar process was applied to all decedents in the dataset. Once the YPLL of a decedent has been determined, that YPLL applies to all data elements associated with that decedent, such as gender, event, industry, and occupation. The results for all data elements were aggregated and presented as an average years of potential life lost for selected groups. These findings can be seen in Table E-1.

Due to limitations in the published life expectancy tables, the dataset was limited to white and black decedents only. Individuals of Hispanic ethnic origin were included if they were classified under white or black race categories. Approximately 9 percent of all decedents were excluded because they were a member of another race or did not have a reported age.

For more information on YPLL, see the article by Meyer and Pegula in the first section of this compendium.

TABLE E-1. **Fatal occupational injuries and average years of potential life lost (YPLL) for all workers of White or Black races by selected characteristics, 2002**[1]

Characteristics	Number	Average YPLL
Total	5,534	34.2
Employee status		
Wage and salary workers[2]	4,481	35.8
Self-employed[3]	1,053	27.6
Sex		
Men	5,092	33.8
Women	442	38.9
Age		
18 to 19 years	92	57.7
20 to 24 years	436	54.2
25 to 34 years	1,023	46.9
35 to 44 years	1,403	37.5
45 to 54 years	1,253	29.2
55 to 64 years	784	21.1
65 and over	495	12.0
Race[4]		
White[5]	4,542	34.5
Black or African American[6]	498	31.2
Event or exposure		
Transportation incidents	2,385	33.5
Highway	1,373	34.2
Collision between vehicles, mobile equipment	636	32.9
Moving in opposite directions, oncoming	202	34.7
Moving in intersection	146	32.2
Moving and standing vehicle, mobile equipment-in roadway	46	32.9
Vehicle struck stationary object or equipment on side of road	293	35.4
Noncollision	373	35.7
Jack-knifed or overturned--no collision	312	36.4
Noncollision accident	271	28.9
Overturned	164	28.1
Worker struck by vehicle, mobile equipment	356	33.4
Worker struck by vehicle, mobile equipment in roadway	126	31.7
Worker struck by vehicle, mobile equipment on side of road	60	37.0
Worker struck by vehicle, mobile equipment in parking lot or non-road area	164	33.5
Water vehicle	71	37.7
Homicides	609	36.3
Hitting, kicking, beating	34	31.9
Shooting	469	36.8
Stabbing	58	34.5
Assaults and violent acts by person(s), n.e.c.	38	39.1
Suicide, self-inflicted injury	199	35.4
Assaults by animals	32	29.5
Contact with objects and equipment	872	33.0
Struck by object	505	31.5
Struck by falling object	302	31.9
Struck by flying object	38	37.6
Struck by rolling, sliding objects on floor or ground level	93	25.9
Caught in or compressed by equipment or objects	231	34.1
Caught in running equipment or machinery	110	34.2
Compressed or pinched by rolling, sliding, or shifting objects	50	33.4
Caught in or crushed in collapsing materials	116	36.7
Excavation or trenching cave-in	34	38.4
Falls	719	32.2

See footnotes at end of table.

TABLE E-1. **Fatal occupational injuries and average years of potential life lost (YPLL) for all workers of White or Black races by selected characteristics, 2002[1] — Continued**

Characteristics	Number	Average YPLL
Event or exposure - continued		
Fall to lower level	638	33.3
Fall from scaffold, staging	88	33.9
Fall from building girders or other structural steel	41	40.3
Fall from nonmoving vehicle	60	29.4
Fall to lower level, n.e.c.	119	32.4
Fall to floor, walkway, or other surface	53	23.5
Contact with electric current	289	40.1
Contact with electric current of machine, tool, appliance, light fixture	42	37.7
Contact with wiring, transformers, or other electrical component	90	39.9
Contact with overhead power lines	122	42.6
Exposure to environmental heat	40	36.7
Inhalation of substance	49	39.3
Drowning, submersion	60	40.6
Fires--unintended or uncontrolled	88	34.9
Explosion of pressure vessel or piping	33	34.4
Worker activity		
Driving, operating	1,531	33.8
Automobile	273	35.9
Airplane	122	32.7
Truck	843	33.2
Industrial or construction vehicle	108	33.9
Truck	121	38.6
Walking in or near roadway, etc., n.e.c.	130	31.7
Vehicular and transportation operations, n.e.c.	215	24.2
Driving, operating farm vehicle	176	23.5
Operating heavy equipment	138	32.3
Using power tools	56	34.4
Logging, trimming, pruning	123	33.2
Construction, assembling, dismantling	493	38.3
Constructing, assembling	133	37.7
Installing	171	40.4
Dismantling, removing	70	37.2
Repairing	204	34.2
Maintenance	88	34.5
Cleaning, washing	100	36.8
Apprehending, breaking up fight, chasing	39	37.8
Physical activity[7], n.e.c.	379	33.7
All other activities	740	34.5
Tending a retail establishment	270	35.2
Office work	83	35.4
Health care and social services activities	33	33.8
Animal care and tending	36	29.3
Occupation[8]		
Managerial and professional specialty	514	32.7
Executive, administrative, and managerial	319	31.7
Managers, food serving and lodging establishments	46	33.9
Management related occupations	48	33.6
Technicians and related support occupations	155	34.8
Airplane pilots and navigators	90	31.7
Sales occupations	349	32.4
Supervisors and proprietors, sales occupations	162	30.7
Sales representatives, finance and business services	30	27.3
Service occupations	485	36.4
Firefighting and fire prevention occupations, including supervisors	53	43.9
Police and detectives, including supervisors	140	38.9

See footnotes at end of table.

TABLE E-1. **Fatal occupational injuries and average years of potential life lost (YPLL) for all workers of White or Black races by selected characteristics, 2002[1] — Continued**

Characteristics	Number	Average YPLL
Occupation[8] - continued		
Police and detectives, public services	80	41.7
Sheriffs, bailiffs, and other law enforcement officers	46	36.8
Service occupations, except protective and household	208	35.1
Food preparation and service occupations	63	37.7
Farming, forestry, and fishing	841	30.1
Farming operators and managers	337	21.8
Farmers, except horticultural	306	21.2
Farm occupations, except managerial	198	37.8
Fishers, hunters, and trappers	33	37.9
Fishers, including vessel captains and officers	33	37.9
Precision production, craft, and repair	1,107	36.2
Mechanics and repairers	275	34.4
Vehicle and mobile equipment mechanics, repairers	115	34.4
Supervisors, construction occupations	108	33.8
Construction trades, except supervisors	576	37.8
Electrical power installers and repairers	41	39.9
Painters, construction and maintenance	46	35.0
Plumbers, pipefitters, steamfitters, and apprentices	34	35.3
Structural metal workers	39	39.1
Machine operators, assemblers, and inspectors	169	37.2
Machine operators and tenders, except precision	95	37.0
Welders and cutters	53	37.4
Motor vehicle operators	952	31.7
Truck drivers	808	31.4
Driver-sales workers	58	39.1
Operating engineers	33	32.3
Handlers, equipment cleaners, helpers, and laborers	585	38.3
Construction laborers	303	39.2
Military occupations[9]	86	47.4
Industry[10]		
Private industry	4,978	34.0
Agriculture, forestry and fishing	790	29.8
Agricultural production - crops	338	25.0
Agricultural production - livestock	129	30.0
Livestock, except dairy and poultry	54	28.0
Landscape and horticultural services	163	37.8
Ornamental shrub and tree services	70	37.6
Forestry	33	37.7
Commercial fishing	31	38.0
Oil and gas extraction	72	37.8
General building contractors	189	35.7
Residential building construction	92	37.8
Single-family housing construction	67	38.3
Heavy construction, except building	246	38.8
Highway and street construction	84	36.6
Heavy construction, except highway	159	39.9
Heavy construction, n.e.c.	47	36.0
Special trade contractors	665	37.5
Plumbing, heating and air-conditioning	68	36.8
Painting and paper hanging	43	35.8
Electrical work	105	38.4
Masonry, stonework, tile setting, and plastering	51	36.2
Masonry and other stonework	30	34.2
Carpentry work	56	39.0
Structural steel erection	43	36.8
Manufacturing	564	33.5
Food and kindred products	64	34.3
Lumber and wood products	142	31.9

See footnotes at end of table.

TABLE E-1. **Fatal occupational injuries and average years of potential life lost (YPLL) for all workers of White or Black races by selected characteristics, 2002[1] — Continued**

Characteristics	Number	Average YPLL
Industry[10] - continued		
Logging	100	32.3
Chemicals and allied products	30	30.0
Stone, clay, glass and concrete products	52	34.0
Trucking and courier services, except air	556	31.6
Local trucking, without storage	144	32.1
Trucking, except local	352	31.2
Water transportation	47	32.4
Water transportation services	34	30.7
Electric, gas, and sanitary services	81	35.4
Electric services	35	36.2
Sanitary services	35	35.0
Wholesale trade-durable goods	113	32.5
Grocery stores	89	35.3
Eating places	94	41.7
Nonstore retailers	32	37.4
Services	682	34.9
Hotels and other lodging places	38	34.7
Personal services	31	32.3
Detective and armored car services	43	30.1
Automotive repair, services, and parking	114	35.4
Membership organizations	34	31.8
Government[11]	556	36.1
Federal government (including resident armed forces)	138	41.7
National security and international affairs	90	45.9
National security	90	45.9
State government	92	32.2
Public administration	52	33.0
Local government	314	34.9
Transportation and public utilities	38	32.4
Services	49	31.9
Public administration	206	37.2
Justice, public order, and safety	159	39.0
Public order and safety	159	39.0
Police protection	108	38.2
Fire protection	46	42.4

[1] Due to limitations of the published National Center for Health Statistics (NCHS) life tables, years of potential life lost (YPLL) were calculated only for White and Black decedents and decedents with specified ages. As a result, 496 fatally injured workers were excluded from these calculations. For presentation purposes, the column titled "Numbers" contains total counts, not the counts from which the average YPLL's were calculated. Therefore, total years of potential life lost cannot be calculated by multiplying the numbers by the average years of potential life lost.
[2] May include volunteers and other workers receiving compensation.
[3] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[4] Per Office of Management and Budget (OMB) Directive 15, CFOI publishes data by race and ethnicity. However, NCHS life tables for 2002 include specific life expectancies for White and Black races only. Therefore, only White and Black races are included in this table. NCHS does not publish life expectancies by Hispanic or Latino origin. This means that individuals of Hispanic or Latino origin are not identified as such, but if they were identified as White or Black racially, they were included in the appropriate category. For this reason, fatality numbers associated with each race category do not reflect previously published White and Black counts.
[5] The category White includes 616 fatalities to decedents of Hispanic or Latino origin.
[6] The category Black or African American includes 7 fatalities to decedents of Hispanic or Latino origin.
[7] Includes walking, sitting, running, and climbing ladders or stairs.
[8] Based on the 1990 Census Occupation Classification System.
[9] Includes fatalities to persons identified as resident armed forces regardless of individual occupation listed.
[10] Based on the 1987 Standard Industrial Classification (SIC) system.
[11] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Frequencies include updated data. Totals for major categories may include subcategories not shown separately. n.e.c. means "not elsewhere classified."

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

Appendix F. Profiles of Fatal Work Injuries and Hazards

This section presents profiles of fatal occupational injuries by specific groupings that are frequently requested by the public. Included in this section are profiles of fatalities involving homicides, workers of Hispanic or Latino ethnicity, workers 18 years and under, and workers in the private residential construction industry. All of these worker groups have either high numbers of fatalities, higher-than-average fatality rates, or are of general interest to the public-at-large.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Total	632	481	247	110	80	30	16	25
Employee status								
Wage and salary workers[1]	451	336	162	85	62	23	12	18
Self-employed[2]	181	145	85	25	18	7	–	7
Sex								
Men	513	411	211	85	62	23	–	13
Women	119	70	36	25	18	7	12	12
Age								
18 to 19 years	10	8	5	–	–	–	–	–
20 to 24 years	64	44	23	11	8	–	–	7
25 to 34 years	147	116	51	26	20	6	–	–
35 to 44 years	157	121	67	25	19	6	–	7
45 to 54 years	140	107	56	22	13	9	5	6
55 to 64 years	67	43	22	21	17	–	–	–
65 and over	46	41	23	–	–	–	–	–
Race or ethnic origin[3]								
White	309	232	108	55	40	15	10	12
Black or African American	121	88	44	27	18	9	–	5
Hispanic or Latino	104	75	35	20	15	5	–	5
American Indian or Alaskan Native	5	5	–	–	–	–	–	–
Asian, Native Hawaiian or Pacific Islander	75	67	52	–	–	–	–	–
Other races or not reported	16	12	7	–	–	–	–	–
Event or exposure								
Assaults and violent acts	632	481	247	110	80	30	16	25
Homicides	632	481	247	110	80	30	16	25
Hitting, kicking, beating	50	29	17	20	14	6	–	–
Shooting	487	386	208	71	53	18	12	18
Stabbing	58	35	12	14	10	–	–	5
Assaults and violent acts by person(s), n.e.c.	34	28	10	5	–	–	–	–
Worker activity								
Vehicular and transportation operations	60	55	32	–	–	–	–	–
Driving, operating	33	30	20	–	–	–	–	–
Automobile	26	23	18	–	–	–	–	–
Truck	6	6	–	–	–	–	–	–
Constructing, repairing, cleaning	28	21	7	5	5	–	–	–
Construction, assembling, dismantling	7	–	–	–	–	–	–	–
Repair, maintenance	12	10	–	–	–	–	–	–
Repairing	8	7	–	–	–	–	–	–
Cleaning, washing	6	5	–	–	–	–	–	–
Protective service activities	99	85	27	13	–	11	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Worker activity - continued								
Apprehending, breaking up fight, chasing	43	39	15	–	–	–	–	–
Materials handling operations	7	–	–	–	–	–	–	–
Physical activity[4], n.e.c.	66	44	18	13	12	–	–	7
All other activities	368	271	163	70	54	16	12	15
Tending a retail establishment	242	210	149	22	16	6	–	8
Office work	53	24	8	19	15	–	5	5
Health care and social services activities	9	–	–	–	–	–	–	–
Activity, n.e.c.	55	31	5	21	20	–	–	–
Location								
Street or highway	89	84	44	–	–	–	–	–
Interstate, freeway, or expressway	6	6	–	–	–	–	–	–
Local road or street	78	73	39	–	–	–	–	–
Industrial place or premise	58	30	6	24	24	–	–	–
Construction site	5	–	–	–	–	–	–	–
Factory, plant	18	5	–	13	13	–	–	–
Industrial place or premises, nec	28	17	–	8	8	–	–	–
Other specified place[5]	72	49	21	15	12	–	–	7
Parking lot, garage (employer's premises)	48	27	12	13	10	–	–	7
Parking lot, garage (except employer's premises)	15	15	8	–	–	–	–	–
Public building[6]	331	264	165	45	28	17	9	13
Bank	5	–	–	–	–	–	–	–
Hotel, motel	12	7	–	–	–	–	–	–
Convenience store	76	70	63	–	–	–	–	–
Office building	34	20	–	6	6	–	5	–
Restaurant, cafe	57	40	27	15	8	7	–	–
Shop, commercial, store, (except grocery)	110	99	55	8	–	–	–	–
Farm	10	–	–	5	5	–	–	–
Farm land under cultivation, fields, meadows	5	–	–	–	–	–	–	–
Private residence[7]	50	39	7	8	5	–	–	–
Apartment	9	6	–	–	–	–	–	–
Residential construction[8]	7	–	–	–	–	–	–	–
Place for recreation and sport	6	–	–	–	–	–	–	–
Residential institution[9]	10	5	–	–	–	–	–	–
Unspecified place	5	–	–	–	–	–	–	–
Occupation (SOC)[10]								
Management occupations	64	36	19	20	15	5	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Occupation (SOC)[10] - continued								
Top executives	6	5	–	–	–	–	–	–
General and operations managers	5	5	–	–	–	–	–	–
Operations specialties managers	6	–	–	–	–	–	–	–
Financial managers	5	–	–	–	–	–	–	–
Other management occupations	51	28	17	19	14	5	–	–
Agricultural managers	5	–	–	–	–	–	–	–
Food service managers	25	19	14	–	–	–	–	–
Lodging managers	5	–	–	–	–	–	–	–
Property, real estate, and community association managers	7	–	–	–	–	–	–	–
Miscellaneous managers	6	–	–	–	–	–	–	–
Managers, all other	6	–	–	–	–	–	–	–
Healthcare practitioners and technical occupations	6	–	–	–	–	–	–	–
Health diagnosing and treating practitioners	5	–	–	–	–	–	–	–
Healthcare support occupations	6	–	–	–	–	–	–	–
Protective service occupations	95	81	24	13	–	10	–	–
First-line supervisors/managers, protective service workers	7	6	–	–	–	–	–	–
First-line supervisors/managers, law enforcement workers	5	5	–	–	–	–	–	–
Law enforcement workers	51	50	10	–	–	–	–	–
Police officers	46	45	8	–	–	–	–	–
Police and sheriff's patrol officers	46	45	8	–	–	–	–	–
Other protective service workers	37	25	12	12	–	10	–	–
Security guards and gaming surveillance officers	37	25	12	12	–	10	–	–
Security guards	37	25	12	12	–	10	–	–
Food preparation and serving related occupations	42	32	21	9	6	–	–	–
Supervisors, food preparation and serving workers	14	11	7	–	–	–	–	–
First-line supervisors/managers, food preparation and serving workers	14	11	7	–	–	–	–	–
First-line supervisors/managers of food preparation and serving workers	10	8	–	–	–	–	–	–
Cooks and food preparation workers	9	8	–	–	–	–	–	–
Cooks	9	8	–	–	–	–	–	–
Cooks, fast food	7	7	–	–	–	–	–	–
Food and beverage serving workers	17	11	8	5	–	–	–	–
Bartenders	6	–	–	–	–	–	–	–
Fast food and counter workers	5	–	–	–	–	–	–	–
Waiters and waitresses	6	–	–	–	–	–	–	–
Building and grounds cleaning and maintenance occupations	10	9	–	–	–	–	–	–
Building cleaning and pest control workers	7	7	–	–	–	–	–	–
Building cleaning workers	7	7	–	–	–	–	–	–
Janitors and cleaners, except maids and housekeeping cleaners	5	5	–	–	–	–	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Occupation (SOC)[10] - continued								
Personal care and service occupations	11	6	–	–	–	–	–	–
Personal appearance workers	5	–	–	–	–	–	–	–
Sales and related occupations	181	160	115	15	11	–	–	5
Supervisors, sales workers	85	74	54	7	5	–	–	–
First-line supervisors/managers, sales workers	85	74	54	7	5	–	–	–
First-line supervisors/managers of retail sales workers	75	68	52	–	–	–	–	–
First-line supervisors/managers of non-retail sales workers	10	6	–	–	–	–	–	–
Retail sales workers	77	70	53	5	–	–	–	–
Cashiers	44	41	35	–	–	–	–	–
Counter and rental clerks and parts salespersons	5	–	–	–	–	–	–	–
Retail salespersons	28	26	18	–	–	–	–	–
Other sales and related workers	16	14	6	–	–	–	–	–
Real estate brokers and sales agents	6	–	–	–	–	–	–	–
Real estate sales agents	6	–	–	–	–	–	–	–
Miscellaneous sales and related workers	10	10	6	–	–	–	–	–
Door-to-door sales workers, news and street vendors, and related workers	10	10	6	–	–	–	–	–
Office and administrative support occupations	37	23	8	–	–	–	–	6
Financial clerks	5	–	–	–	–	–	–	–
Information and record clerks	6	–	–	–	–	–	–	–
Material recording, scheduling, dispatching, and distributing workers	14	11	–	–	–	–	–	–
Stock clerks and order fillers	6	–	–	–	–	–	–	–
Secretaries and administrative assistants	5	–	–	–	–	–	–	–
Other office and administrative support workers	5	–	–	–	–	–	–	–
Farming, fishing, and forestry occupations	9	–	–	–	–	–	–	–
Agricultural workers	8	–	–	–	–	–	–	–
Miscellaneous agricultural workers	8	–	–	–	–	–	–	–
Farmworkers and laborers, crop, nursery, and greenhouse	5	–	–	–	–	–	–	–
Construction and extraction occupations	17	11	–	5	5	–	–	–
Construction trades workers	14	9	–	5	5	–	–	–
Construction laborers	5	5	–	–	–	–	–	–
Installation, maintenance, and repair occupations	27	22	–	–	–	–	–	–
Supervisors of installation, maintenance, and repair workers	6	5	–	–	–	–	–	–
First-line supervisors/managers of mechanics, installers, and repairers	6	5	–	–	–	–	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Occupation (SOC)[10] - continued								
Vehicle and mobile equipment mechanics, installers, and repairers	17	14	–	–	–	–	–	–
Automotive technicians and repairers	15	12	–	–	–	–	–	–
Automotive service technicians and mechanics	12	9	–	–	–	–	–	–
Production occupations	27	13	8	12	12	–	–	–
First-line supervisors/managers of production and operating workers	6	–	–	–	–	–	–	–
Assemblers and fabricators	5	–	–	5	5	–	–	–
Miscellaneous assemblers and fabricators	5	–	–	5	5	–	–	–
Assemblers and fabricators, all other	5	–	–	5	5	–	–	–
Other production occupations	5	–	–	–	–	–	–	–
Transportation and material moving occupations	84	73	44	11	9	–	–	–
Motor vehicle operators	67	62	37	5	–	–	–	–
Driver/sales workers and truck drivers	22	20	10	–	–	–	–	–
Driver/sales workers	9	9	8	–	–	–	–	–
Truck drivers, heavy and tractor-trailer	12	10	–	–	–	–	–	–
Taxi drivers and chauffeurs	45	42	27	–	–	–	–	–
Material moving workers	9	5	–	–	–	–	–	–
Laborers and material movers, hand	6	5	–	–	–	–	–	–
Laborers and freight, stock, and material movers, hand	5	–	–	–	–	–	–	–
Industry (NAICS)[11]								
Private industry	561	420	235	104	78	26	15	22
Goods producing	60	28	–	26	26	–	–	–
Natural resources and mining	18	6	–	9	9	–	–	–
Agriculture, forestry, fishing and hunting	17	5	–	9	9	–	–	–
Crop production	9	–	–	5	5	–	–	–
Greenhouse, nursery, and floriculture production	6	–	–	–	–	–	–	–
Nursery and floriculture production	5	–	–	–	–	–	–	–
Nursery and tree production	5	–	–	–	–	–	–	–
Construction	17	11	–	–	–	–	–	–
Construction	17	11	–	–	–	–	–	–
Construction of buildings	7	5	–	–	–	–	–	–
Residential building construction	6	–	–	–	–	–	–	–
Residential building construction	6	–	–	–	–	–	–	–
Residential remodelers	5	–	–	–	–	–	–	–
Specialty trade contractors	9	5	–	–	–	–	–	–
Manufacturing	25	11	–	13	13	–	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Industry (NAICS)[11] - continued								
Manufacturing	25	11	–	13	13	–	–	–
Transportation equipment manufacturing	11	–	–	10	10	–	–	–
Motor vehicle parts manufacturing	5	–	–	–	–	–	–	–
Aerospace product and parts manufacturing	6	–	–	6	6	–	–	–
Aerospace product and parts manufacturing	6	–	–	6	6	–	–	–
Other aircraft parts and auxiliary equipment manufacturing	6	–	–	6	6	–	–	–
Service providing	501	392	232	78	52	26	13	18
Trade, transportation, and utilities	247	213	149	23	17	6	–	8
Wholesale trade	15	8	–	–	–	–	–	–
Merchant wholesalers, durable goods	10	5	–	–	–	–	–	–
Retail trade	172	153	115	12	11	–	–	6
Motor vehicle and parts dealers	17	16	6	–	–	–	–	–
Automobile dealers	5	–	–	–	–	–	–	–
Other motor vehicle dealers	5	5	–	–	–	–	–	–
Motorcycle, boat, and other motor vehicle dealers	5	5	–	–	–	–	–	–
Motorcycle dealers	5	5	–	–	–	–	–	–
Automotive parts, accessories, and tire stores	7	7	–	–	–	–	–	–
Food and beverage stores	81	71	57	6	5	–	–	–
Grocery stores	67	58	48	5	–	–	–	–
Supermarkets and other grocery (except convenience) stores	22	15	11	–	–	–	–	–
Convenience stores	39	38	35	–	–	–	–	–
Specialty food stores	8	7	5	–	–	–	–	–
Beer, wine, and liquor stores	6	6	–	–	–	–	–	–
Beer, wine, and liquor stores	6	6	–	–	–	–	–	–
Gasoline stations	30	29	26	–	–	–	–	–
Gasoline stations	30	29	26	–	–	–	–	–
Gasoline stations with convenience stores	26	25	24	–	–	–	–	–
Clothing and clothing accessories stores	11	10	8	–	–	–	–	–
Clothing stores	5	–	–	–	–	–	–	–
Jewelry, luggage, and leather goods stores	6	6	–	–	–	–	–	–
Jewelry stores	6	6	–	–	–	–	–	–
General merchandise stores	6	–	–	–	–	–	–	–
Miscellaneous store retailers	11	10	6	–	–	–	–	–
Transportation and warehousing	60	52	30	7	5	–	–	–
Truck transportation	11	9	–	–	–	–	–	–
General freight trucking	10	8	–	–	–	–	–	–
General freight trucking, long-distance	8	6	–	–	–	–	–	–
General freight trucking, long-distance, truckload	6	5	–	–	–	–	–	–
Transit and ground passenger transportation	46	43	28	–	–	–	–	–
Taxi and limousine service	46	43	28	–	–	–	–	–
Taxi service	44	41	26	–	–	–	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Industry (NAICS)[11] - continued								
Information	7	–	–	–	–	–	–	–
Information	7	–	–	–	–	–	–	–
Financial activities	36	28	11	6	–	–	–	–
Finance and insurance	13	12	8	–	–	–	–	–
Credit intermediation and related activities	13	12	8	–	–	–	–	–
Nondepository credit intermediation	6	6	–	–	–	–	–	–
Other nondepository credit intermediation	6	6	–	–	–	–	–	–
Real estate and rental and leasing	23	16	–	6	–	–	–	–
Real estate	18	11	–	6	–	–	–	–
Lessors of real estate	8	5	–	–	–	–	–	–
Lessors of residential buildings and dwellings	7	–	–	–	–	–	–	–
Offices of real estate agents and brokers	7	5	–	–	–	–	–	–
Offices of real estate agents and brokers	7	5	–	–	–	–	–	–
Rental and leasing services	5	5	–	–	–	–	–	–
Professional and business services	31	19	6	8	5	–	–	–
Professional and technical services	8	–	–	–	–	–	–	–
Professional and technical services	8	–	–	–	–	–	–	–
Administrative and waste services	23	16	–	7	–	–	–	–
Administrative and support services	22	15	–	7	–	–	–	–
Employment services	5	5	–	–	–	–	–	–
Temporary help services	5	5	–	–	–	–	–	–
Investigation and security services	13	8	–	5	–	–	–	–
Investigation, guard, and armored car services	13	8	–	5	–	–	–	–
Security guards and patrol services	12	7	–	5	–	–	–	–
Educational and health services	14	8	–	–	–	–	–	–
Health care and social assistance	13	7	–	–	–	–	–	–
Nursing and residential care facilities	7	–	–	–	–	–	–	–
Leisure and hospitality	111	80	51	27	15	12	–	–
Accommodation and food services	108	79	51	25	13	12	–	–
Accommodation	14	8	5	–	–	–	–	–
Traveler accommodation	12	7	5	–	–	–	–	–
Hotels (except casino hotels) and motels	10	6	–	–	–	–	–	–
Food services and drinking places	94	71	46	21	10	11	–	–
Full-service restaurants	22	14	10	7	6	–	–	–
Full-service restaurants	22	14	10	7	6	–	–	–
Limited-service eating places	44	38	28	5	–	–	–	–
Limited-service eating places	44	38	28	5	–	–	–	–
Limited-service restaurants	36	32	25	–	–	–	–	–
Special food services	5	5	–	–	–	–	–	–
Mobile food services	5	5	–	–	–	–	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Industry (NAICS)[11] - continued								
Drinking places (alcoholic beverages)	23	14	–	9	–	9	–	–
Drinking places (alcoholic beverages)	23	14	–	9	–	9	–	–
Other services, except public administration	55	41	12	9	8	–	–	–
Other services, except public administration	55	41	12	9	8	–	–	–
Repair and maintenance	30	21	–	8	8	–	–	–
Automotive repair and maintenance	25	16	–	8	8	–	–	–
Automotive mechanical and electrical repair and maintenance	18	10	–	7	7	–	–	–
General automotive repair	10	8	–	–	–	–	–	–
Other automotive mechanical and electrical repair and maintenance	7	–	–	6	6	–	–	–
Automotive body, paint, interior, and glass repair	5	–	–	–	–	–	–	–
Automotive body, paint, and interior repair and maintenance	5	–	–	–	–	–	–	–
Personal and laundry services	19	14	6	–	–	–	–	–
Personal care services	8	5	–	–	–	–	–	–
Hair, nail, and skin care services	6	–	–	–	–	–	–	–
Drycleaning and laundry services	9	8	–	–	–	–	–	–
Coin-operated laundries and drycleaners	6	5	–	–	–	–	–	–
Religious, grantmaking, civic, professional, and similar organizations	5	5	–	–	–	–	–	–
Government[12]	71	61	12	6	–	–	–	–
State government	13	11	–	–	–	–	–	–
Service-Providing	13	11	–	–	–	–	–	–
Public administration	11	10	–	–	–	–	–	–
Public administration	11	10	–	–	–	–	–	–
Justice, public order, and safety activities	10	9	–	–	–	–	–	–
Justice, public order, and safety activities	10	9	–	–	–	–	–	–
Police protection	6	6	–	–	–	–	–	–
Local government	55	47	11	–	–	–	–	–
Service-Providing	55	47	11	–	–	–	–	–
Public administration	49	46	11	–	–	–	–	–
Public administration	49	46	11	–	–	–	–	–

See footnotes at end of table.

TABLE F-1. **Occupational homicides by selected characteristics, US, 2003 — Continued**

Characteristics	Total fatalities (number)	Circumstances or alleged perpetrator						
		Robberies and other crimes		Work associates			Relatives	Other personal acquaint-ances
		Total	Robberies	Total	Co-worker, former co-worker	Customer, client		
Industry (NAICS)[11] - continued								
Justice, public order, and safety activities	47	46	11	–	–	–	–	–
Justice, public order, and safety activities	47	46	11	–	–	–	–	–
Police protection	46	45	11	–	–	–	–	–

[1] May include volunteers and others receiving compensation.
[2] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[3] Persons identified as Hispanic may be of any race. The individual racial categories shown exclude data for Hispanics.
[4] Includes walking, sitting, running, and climbing ladders or stairs.
[5] Primarily includes outdoor areas such as bodies of water, woods, noncultivated fields, and parking lots.
[6] Buildings and adjacent grounds used by the general public or a particular group, such as hotels, restaurants, stores, office buildings, courthouses, and schools.
[7] Private residence fatalities primarily occurred to repair or maintenance workers, police while on duty, firefighters, or residential construction workers.
[8] The residential construction location category was implemented in 1998.
[9] Includes children's home, dormitory, hospital, jail, nursing home, and reform school.
[10] Data are classified according to the 2000 Standard Occupational Classification system.
[11] Data are classified according to the 2002 North American Industry Classification System.
[12] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. n.e.c. means "not elsewhere classified."

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Total	794	275	519
Country of origin			
Argentina	5	–	5
Bolivia	3	–	3
Brazil	4	–	4
Colombia	6	–	6
Costa Rica	4	–	4
Cuba	27	–	27
Dominican Republic	8	–	8
Ecuador	11	–	11
El Salvador	36	–	36
Guatemala	19	–	19
Honduras	11	–	11
Mexico	356	–	356
Nicaragua	5	–	5
Paraguay	3	–	3
Peru	8	–	8
State of incident			
Alabama	8	5	3
Arizona	17	10	7
Arkansas	9	9	–
California	164	66	98
Colorado	25	7	18
District of Columbia	3	–	3
Florida	90	17	73
Georgia	26	3	23
Idaho	3	–	–
Illinois	22	7	15
Indiana	7	–	5
Kansas	4	–	4
Kentucky	3	–	–
Maryland	11	–	10
Massachusetts	6	–	4
Michigan	4	3	–
Minnesota	5	3	–
Missouri	6	4	–
Nebraska	3	–	–
Nevada	10	3	7
New Jersey	24	4	20
New Mexico	9	6	3
New York (including N.Y.C.)	36	6	30
New York City	28	4	24
North Carolina	21	–	19
Ohio	15	4	11
Oklahoma	3	–	3
Oregon	7	4	3
Pennsylvania	10	7	3
South Carolina	18	3	15
Tennessee	8	–	8
Texas	163	74	89
Utah	11	–	9
Virginia	13	–	11
Washington	5	3	–
Wisconsin	3	–	3

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Employee status			
Wage and salary workers[2]	692	246	446
Self-employed[3]	102	29	73
Sex			
Men	748	251	497
Women	46	24	22
Age			
Under 16 years	4	–	–
16 to 17 years	9	–	7
18 to 19 years	18	10	8
20 to 24 years	121	36	85
25 to 34 years	240	88	152
35 to 44 years	188	65	123
45 to 54 years	124	40	84
55 to 64 years	70	20	50
65 and over	20	12	8
Event or exposure			
Transportation incidents	252	107	145
Highway	138	69	69
Collision between vehicles, mobile equipment	62	28	34
Moving in same direction	19	6	13
Moving in opposite directions, oncoming	19	11	8
Moving in intersection	12	7	5
Moving and standing vehicle, mobile equipment-in roadway	3	–	–
Vehicle struck stationary object or equipment on side of road	25	14	11
Noncollision	46	25	21
Jack-knifed or overturned--no collision	38	23	15
Ran off highway--no collision	5	–	–
Nonhighway (farm, industrial premises)	40	12	28
Vehicle, mobile equipment struck stationary object	7	4	3
Noncollision accident	29	7	22
Fall from moving vehicle, mobile equipment	3	–	3
Fell from and struck by vehicle, mobile equipment	4	–	3
Overturned	18	5	13
Aircraft	7	5	–
Worker struck by vehicle, mobile equipment	61	19	42
Worker struck by vehicle, mobile equipment in roadway	20	4	16
Worker struck by vehicle, mobile equipment on side of road	6	–	5
Worker struck by vehicle, mobile equipment in parking lot or non-road area	34	14	20
Assaults and violent acts	128	44	84
Homicides	104	36	68
Hitting, kicking, beating	3	–	3
Shooting	78	26	52
Stabbing	19	6	13
Assaults and violent acts by person(s), n.e.c.	3	3	–
Suicide, self-inflicted injury	18	6	12
Assaults by animals	6	–	4
Contact with objects and equipment	169	48	121
Struck by object	99	34	65
Struck by falling object	60	20	40
Struck by flying object	12	7	5
Struck by dislodged flying object	6	–	4

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Event or exposure - continued			
Struck by discharged object or substance	6	5	–
Struck by swinging or slipping object	9	–	8
Struck by rolling, sliding objects on floor or ground level	9	6	3
Caught in or compressed by equipment or objects	44	11	33
Caught in running equipment or machinery	23	7	16
Compressed or pinched by rolling, sliding, or shifting objects	11	3	8
Caught in or crushed in collapsing materials	24	3	21
Excavation or trenching cave-in	15	–	14
Caught in or crushed in collapsing structure	6	–	5
Falls	130	35	95
Fall to lower level	127	33	94
Fall from floor, dock, or ground level	6	3	3
Fall through existing floor opening	5	3	–
Fall from ladder	23	4	19
Fall from roof	39	7	32
Fall through existing roof opening	3	–	–
Fall through roof surface	3	–	3
Fall through skylight	6	–	5
Fall from roof edge	22	4	18
Fall from scaffold, staging	26	7	19
Fall from building girders or other structural steel	7	4	3
Fall from nonmoving vehicle	9	–	8
Fall to lower level, n.e.c.	15	6	9
Exposure to harmful substances or environments	86	31	55
Contact with electric current	45	18	27
Contact with electric current of machine, tool, appliance, light fixture	7	–	5
Contact with wiring, transformers, or other electrical component	13	8	5
Contact with overhead power lines	19	8	11
Struck by lightning	6	–	6
Contact with temperature extremes	10	–	8
Exposure to environmental heat	8	–	6
Exposure to caustic, noxious, or allergenic substances	22	8	14
Inhalation of substance	14	4	10
Inhalation in enclosed, restricted, or confined space[4]	7	–	5
Inhalation in open or nonconfined space	7	–	5
Ingestion of substance	6	4	–
Oxygen deficiency	9	3	6
Drowning, submersion	7	–	6
Fires and explosions	28	9	19
Fires--unintended or uncontrolled	16	4	12
Fire in residence, building, or other structure	5	–	3
Explosion	12	5	7
Explosion of pressure vessel or piping	9	4	5
Primary and secondary source			
Primary source[5]			
Vehicles	256	112	144
Air vehicle	7	5	–
Aircraft--powered fixed wing	3	–	–
Aircraft--powered rotary wing	3	3	–
Helicopter	3	3	–
Highway vehicle, motorized	196	90	106
Automobile	36	17	19
Truck	135	64	71
Delivery truck	5	–	3
Dump truck	6	–	5

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Primary and secondary source - continued			
Primary source[5] - continued			
Pickup truck	37	18	19
Semitrailer, tractor trailer, trailer truck	48	27	21
Van--passenger or light delivery	20	8	12
Offroad vehicle, nonindustrial	8	5	3
All terrain vehicle (ATV)	6	3	3
Plant and industrial powered vehicles, tractors	36	10	26
Forklift	20	4	16
Tractor	15	6	9
Rail vehicle	3	–	–
Water vehicle	4	–	4
Tugboat, commercial fishing boat	4	–	4
Structures and surfaces	147	40	107
Floors, walkways, ground surfaces	128	34	94
Floors	41	11	30
Ground	52	11	41
Sidewalks, paths, outdoor walkways	8	–	6
Street, road	5	–	3
Surfaces below ground level, n.e.c.	7	–	5
Ditches, channels, trenches, excavations	6	–	5
Parking lots	3	–	–
Other structural elements	9	–	8
Walls	4	–	4
Structures	10	5	5
Buildings--office, plant, residential	3	–	–
Towers, poles	5	4	–
Machinery	74	23	51
Agricultural and garden machinery	7	–	6
Mowing machinery	3	–	3
Lawn mowers--riding	3	–	3
Other agricultural and garden machinery	3	–	–
Construction, logging, and mining machinery	34	11	23
Excavating machinery	16	7	9
Backhoes	12	6	6
Loaders	11	–	10
Front end loaders	9	–	8
Logging and wood processing machinery--specialized	3	–	–
Material handling (cranes, conveyers, jacks)	12	5	7
Cranes	3	–	–
Elevators	4	–	–
Metal, woodworking, and special material machinery	9	–	7
Extruding, injecting, forming, molding machinery	3	–	3
Special process machinery	6	–	4
Packaging, bottling, wrapping machinery	3	–	–
Miscellaneous machinery	5	–	3
Street sweeping and cleaning machinery	3	–	–
Parts and materials	82	31	51
Building materials--solid elements	31	7	24
Bricks, blocks, structural stone	6	–	5
Pipes, ducts, tubing	11	3	8
Structural metal materials	6	–	5
Wood, lumber	4	–	–
Other building materials--solid elements	4	–	4
Fasteners, connectors, ropes, ties	11	4	7
Ropes, ties	9	–	7
Rope, twine, string	5	–	5
Machine, tool, and electrical parts	28	19	9
Electric parts	25	17	8

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Primary and secondary source - continued			
Primary source[5] - continued			
Electrical wiring	15	11	4
Power lines, transformers, convertors	7	5	–
Vehicle and mobile equipment parts	8	–	7
Tires, inner tubes, wheels	3	–	3
Trailers	3	–	3
Persons, plants, animals, and minerals	34	6	28
Animals and animal products	6	–	5
Mammals, except humans	4	–	3
Food products--fresh or processed	4	–	–
Nonmetallic minerals, except fuel	8	–	8
Dirt, earth	6	–	6
Person--other than injured or ill worker	3	–	–
Plants, trees, vegetation--not processed	11	–	10
Trees, logs	11	–	10
Chemicals and chemical products	21	8	13
Chemical products--general	7	5	–
Drugs, alcohol, medicines	6	4	–
Other chemicals	10	3	7
Oxygen and oxygen compounds, n.e.c.	8	–	6
Carbon monoxide	8	–	6
Tools, instruments, and equipment	32	8	24
Handtools--nonpowered	24	7	17
Cutting handtools	22	6	16
Knives	16	4	12
Ladders	4	–	4
Ladders--movable	4	–	4
Extension ladders	3	–	3
Containers	14	4	10
Containers-nonpressurized	7	–	6
Tanks, bins, vats	6	–	5
Containers-variable restraint	5	–	3
Bundles, bales	5	–	3
Other	134	43	91
Furniture and fixtures	4	–	–
Other fixtures	3	–	–
Ammunition	85	30	55
Bullets	83	28	55
Atmospheric and environmental conditions	31	7	24
Fire, flame, smoke	16	4	12
Fire, flame	15	4	11
Temperature extreme	8	–	6
Heat--environmental	8	–	6
Weather and atmospheric conditions	6	–	6
Lightning	6	–	6
Steam, vapors, liquids	11	–	9
Liquids	9	–	8
Water	9	–	8
Secondary source[6]			
Vehicles	104	44	60
Highway vehicle, motorized	90	41	49
Automobile	13	7	6
Truck	74	33	41

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Primary and secondary source - continued			
Secondary source[6] - continued			
Delivery truck	4	–	3
Dump truck	4	3	–
Pickup truck	14	7	7
Semitrailer, tractor trailer, trailer truck	32	15	17
Plant and industrial powered vehicles, tractors	8	–	7
Forklift	8	–	7
Structures and surfaces	141	46	95
Floors, walkways, ground surfaces	29	11	18
Floors	9	3	6
Ground	9	4	5
Street, road	3	–	–
Surfaces below ground level, n.e.c.	4	–	4
Ditches, channels, trenches, excavations	4	–	4
Other structural elements	46	12	34
Roof	32	5	27
Walls	6	3	3
Structures	65	22	43
Buildings--office, plant, residential	6	3	3
Mines, caves, tunnels	5	–	4
Scaffolds, staging	24	5	19
Towers, poles	9	6	3
Other structures	18	7	11
Guardrails, road dividers	15	6	9
Machinery	39	10	29
Construction, logging, and mining machinery	10	–	9
Excavating machinery	9	–	8
Backhoes	5	–	4
Heating, cooling, and cleaning machinery and appliances	3	–	–
Material handling (cranes, conveyers, jacks)	17	4	13
Elevators	4	–	3
Manlifts	4	–	3
Jacks	9	–	7
Metal, woodworking, and special material machinery	4	–	–
Parts and materials	42	11	31
Building materials--solid elements	11	–	9
Pipes, ducts, tubing	3	–	3
Structural metal materials	4	–	–
Fasteners, connectors, ropes, ties	4	–	4
Ropes, ties	4	–	4
Machine, tool, and electrical parts	21	6	15
Electric parts	21	6	15
Electrical wiring	3	–	–
Power lines, transformers, convertors	15	5	10
Vehicle and mobile equipment parts	6	3	3
Trailers	3	–	–
Persons, plants, animals, and minerals	121	43	78
Nonmetallic minerals, except fuel	5	–	3
Person--other than injured or ill worker	102	35	67
Co-worker, former co-worker or injured worker	16	5	11
Relative of injured worker	5	3	–
Robber	34	9	25
Plants, trees, vegetation--not processed	12	5	7
Trees, logs	12	5	7
Chemicals and chemical products	14	5	9
Coal, natural gas, petroleum fuels and products	7	3	4

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Primary and secondary source - continued			
Secondary source[6] - continued			
Petroleum fuels, distillates, products, unspecified	5	–	3
Gasoline, diesel fuel, jet fuel	3	–	–
Tools, instruments, and equipment	30	10	20
Handtools--powered	3	–	–
Ladders	21	5	16
Ladders--movable	15	4	11
Extension ladders	6	–	5
Step ladders	4	–	–
Other tools	5	4	–
Firearms	4	4	–
Containers	14	6	8
Containers-nonpressurized	7	–	5
Tanks, bins, vats	7	–	5
Containers-pressurized	7	4	3
Pressure lines, except hoses	3	–	–
Other	39	16	23
Furniture and fixtures	5	3	–
Cases, cabinets, racks, and shelves	3	–	–
Atmospheric and environmental conditions	5	3	–
Weather and atmospheric conditions	5	3	–
Steam, vapors, liquids	26	10	16
Liquids	26	10	16
Water	25	9	16
Not reported	250	84	166
Worker activity			
Vehicular and transportation operations	243	104	139
Driving, operating	136	65	71
Automobile	22	13	9
Airplane	3	–	–
Truck	67	36	31
Industrial or construction vehicle	23	5	18
Riding in, on	53	22	31
Automobile	6	3	–
Airplane	3	3	–
Truck	25	13	12
Boat	3	–	3
Horse	3	–	–
Boarding, alighting	9	4	5
Directing, flagging traffic	7	5	–
Walking in or near roadway, etc., n.e.c.	21	3	18
Vehicular and transportation operations, n.e.c.	10	4	6
Driving, operating farm vehicle	7	3	4
Riding in, on farm vehicle	3	–	–
Using or operating tools, machinery	62	17	45
Operating heavy equipment	20	7	13
Earth moving machinery	3	–	–
Materials handling machinery	5	–	3
Operating machinery	13	4	9
Using power tools	3	–	–
Using nonpowered hand tools	6	–	6
Welding	5	–	3
Logging, trimming, pruning	14	–	12

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Worker activity - continued			
Constructing, repairing, cleaning	263	65	198
Construction, assembling, dismantling	132	30	102
Constructing, assembling	27	9	18
Installing	54	10	44
Dismantling, removing	21	4	17
Planting (landscape work)	3	–	3
Repair, maintenance	65	25	40
Repairing	33	12	21
Maintenance	7	3	4
Adjusting	3	–	3
Inspecting or checking	10	6	4
Cleaning, washing	29	–	27
Painting, etc.	13	–	12
Protective service activities	18	9	9
Apprehending, breaking up fight, chasing	4	3	–
Materials handling operations	52	15	37
Carrying materials	6	–	4
Holding materials	3	–	–
Loading, unloading (packing, unpacking) materials	18	3	15
Materials handling, n.e.c.	15	4	11
Physical activity[7], n.e.c.	71	38	33
All other activities	85	27	58
Tending a retail establishment	40	10	30
Office work	7	3	4
Health care and social services activities	3	–	–
Animal care and tending	4	–	3
Activity, n.e.c.	29	10	19
Location			
Street or highway	220	94	126
Interstate, freeway, or expressway	38	16	22
Other highway (State or U.S.)	56	31	25
Local road or street	76	24	52
Road construction[8]	29	10	19
Industrial place or premise	244	81	163
Industrial place and premises, unspecified	7	–	7
Dockyard	6	–	5
Loading platform, factory or store	4	3	–
Railway yard, includes railway line, tracks	3	–	–
Warehouse	18	5	13
Construction site	102	29	73
Factory, plant	42	14	28
Industrial place or premises, nec	47	22	25
Other specified place[9]	65	28	37
Parking lot, garage (employer's premises)	26	11	15
Parking lot, garage (except employer's premises)	6	3	3
River	4	–	3
Sea	6	–	5
Woods	6	3	3
Public building[10]	74	23	51
Hotel, motel	5	–	3
Convenience store	3	–	3
Office building	9	3	6

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Location - continued			
Restaurant, cafe	20	5	15
Shop, commercial, store, (except grocery)	22	9	13
School (State, public, private)	3	–	–
Farm	46	9	37
Farm buildings	4	–	4
Farm land under cultivation, fields, meadows	24	4	20
Private residence[11]	123	28	95
Apartment	16	4	12
Residential construction[12]	72	17	55
Mine, quarry	6	–	4
Place for recreation and sport	9	5	4
Recreation, sports center on employer's premises	3	–	–
Recreational and sports areas	5	3	–
Residential institution[13]	3	3	–
Unspecified place	4	–	–
Occupation[14] (SOC)			
Management occupations	21	5	16
Other management occupations	19	4	15
Agricultural managers	4	–	–
Farmers and ranchers	3	–	–
Construction managers	4	–	3
Construction managers	4	–	3
Food service managers	7	–	7
Food service managers	7	–	7
Architecture and engineering occupations	4	–	–
Arts, design, entertainment, sports, and media occupations	4	–	3
Entertainers and performers, sports and related workers	3	–	–
Healthcare practitioners and technical occupations	3	3	–
Healthcare support occupations	4	3	–
Nursing, psychiatric, and home health aides	3	–	–
Nursing, psychiatric, and home health aides	3	–	–
Protective service occupations	27	18	9
Law enforcement workers	11	10	–
Police officers	10	9	–
Police and sheriff's patrol officers	10	9	–
Other protective service workers	15	7	8
Security guards and gaming surveillance officers	14	6	8
Security guards	14	6	8
Food preparation and serving related occupations	14	6	8
Supervisors, food preparation and serving workers	4	–	–
First-line supervisors/managers, food preparation and serving workers	4	–	–
First-line supervisors/managers of food preparation and serving workers	3	–	–
Cooks and food preparation workers	3	–	–
Cooks	3	–	–
Food and beverage serving workers	4	–	–
Waiters and waitresses	3	–	–
Waiters and waitresses	3	–	–

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Occupation[14] (SOC) - continued			
Other food preparation and serving related workers	3	–	–
Building and grounds cleaning and maintenance occupations	63	5	58
Supervisors, building and grounds cleaning and maintenance workers	7	–	6
First-line supervisors/managers, building and grounds cleaning and maintenance workers	7	–	6
First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers	6	–	5
Building cleaning and pest control workers	10	–	9
Building cleaning workers	10	–	9
Janitors and cleaners, except maids and housekeeping cleaners	8	–	7
Grounds maintenance workers	46	3	43
Grounds maintenance workers	46	3	43
Landscaping and groundskeeping workers	36	–	35
Tree trimmers and pruners	10	–	8
Personal care and service occupations	5	–	3
Sales and related occupations	32	14	18
Supervisors, sales workers	14	8	6
First-line supervisors/managers, sales workers	14	8	6
First-line supervisors/managers of retail sales workers	12	6	6
Retail sales workers	9	3	6
Cashiers	4	–	–
Cashiers	4	–	–
Retail salespersons	4	–	3
Retail salespersons	4	–	3
Other sales and related workers	7	–	5
Miscellaneous sales and related workers	7	–	5
Door-to-door sales workers, news and street vendors, and related workers	7	–	5
Office and administrative support occupations	15	6	9
Information and record clerks	3	–	–
Material recording, scheduling, dispatching, and distributing workers	7	–	5
Stock clerks and order fillers	3	–	–
Stock clerks and order fillers	3	–	–
Farming, fishing, and forestry occupations	70	16	54
Agricultural workers	59	14	45
Miscellaneous agricultural workers	56	11	45
Agricultural equipment operators	3	–	–
Farmworkers and laborers, crop, nursery, and greenhouse	34	7	27
Farmworkers, farm and ranch animals	16	3	13
Agricultural workers, all other	3	–	3
Fishing and hunting workers	6	–	6
Fishers and related fishing workers	5	–	5
Fishers and related fishing workers	5	–	5
Forest, conservation, and logging workers	4	–	–
Logging workers	4	–	–
Construction and extraction occupations	257	74	183
Supervisors, construction and extraction workers	12	6	6
First-line supervisors/managers of construction trades and extraction workers	12	6	6
First-line supervisors/managers of construction trades and extraction workers	12	6	6
Construction trades workers	221	60	161
Brickmasons, blockmasons, and stonemasons	3	–	3
Carpenters	30	9	21
Carpenters	30	9	21
Cement masons, concrete finishers, and terrazzo workers	3	–	–
Cement masons and concrete finishers	3	–	–
Construction laborers	105	26	79
Construction laborers	105	26	79

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Occupation[14] (SOC) - continued			
Construction equipment operators	7	–	6
Operating engineers and other construction equipment operators	7	–	6
Drywall installers, ceiling tile installers, and tapers	9	3	6
Drywall and ceiling tile installers	9	3	6
Electricians	13	7	6
Electricians	13	7	6
Painters and paperhangers	18	3	15
Painters, construction and maintenance	17	–	15
Pipelayers, plumbers, pipefitters, and steamfitters	6	3	3
Plumbers, pipefitters, and steamfitters	4	–	–
Plasterers and stucco masons	4	–	3
Plasterers and stucco masons	4	–	3
Roofers	13	–	11
Roofers	13	–	11
Structural iron and steel workers	7	–	5
Structural iron and steel workers	7	–	5
Helpers, construction trades	8	–	7
Helpers, construction trades	8	–	7
Other construction and related workers	8	–	7
Hazardous materials removal workers	3	–	3
Hazardous materials removal workers	3	–	3
Highway maintenance workers	3	–	–
Highway maintenance workers	3	–	–
Extraction workers	8	6	–
Miscellaneous extraction workers	4	–	–
Extraction workers, all other	4	–	–
Installation, maintenance, and repair occupations	61	26	35
Electrical and electronic equipment mechanics, installers, and repairers	3	–	–
Vehicle and mobile equipment mechanics, installers, and repairers	22	6	16
Automotive technicians and repairers	14	4	10
Automotive body and related repairers	5	–	4
Automotive service technicians and mechanics	9	3	6
Heavy vehicle and mobile equipment service technicians and mechanics	3	–	3
Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	3	–	–
Tire repairers and changers	3	–	–
Other installation, maintenance, and repair occupations	35	18	17
Heating, air conditioning, and refrigeration mechanics and installers	4	–	–
Heating, air conditioning, and refrigeration mechanics and installers	4	–	–
Industrial machinery installation, repair, and maintenance workers	17	8	9
Industrial machinery mechanics	4	–	–
Maintenance and repair workers, general	11	6	5
Line installers and repairers	7	6	–
Electrical power-line installers and repairers	4	3	–
Telecommunications line installers and repairers	3	3	–
Miscellaneous installation, maintenance, and repair workers	7	–	5
Installation, maintenance, and repair workers, all other	4	–	–
Production occupations	54	20	34
First-line supervisors/managers of production and operating workers	7	3	4
First-line supervisors/managers of production and operating workers	7	3	4
Assemblers and fabricators	5	–	5
Miscellaneous assemblers and fabricators	5	–	5
Assemblers and fabricators, all other	5	–	5
Food processing workers	4	–	–
Butchers and other meat, poultry, and fish processing workers	4	–	–
Butchers and meat cutters	3	–	–
Metal workers and plastic workers	15	4	11
Welding, soldering, and brazing workers	8	3	5
Welders, cutters, solderers, and brazers	7	3	4
Miscellaneous metalworkers and plastic workers	3	–	3
Metal workers and plastic workers, all other	3	–	3

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Occupation[14] (SOC) - continued			
Other production occupations	17	6	11
Packaging and filling machine operators and tenders	3	3	–
Packaging and filling machine operators and tenders	3	3	–
Miscellaneous production workers	7	–	6
Helpers--production workers	3	–	–
Production workers, all other	4	–	4
Transportation and material moving occupations	150	65	85
Air transportation workers	4	–	–
Aircraft pilots and flight engineers	4	–	–
Commercial pilots	4	–	–
Motor vehicle operators	92	46	46
Driver/sales workers and truck drivers	79	43	36
Driver/sales workers	3	–	–
Truck drivers, heavy and tractor-trailer	67	38	29
Truck drivers, light or delivery services	9	3	6
Taxi drivers and chauffeurs	12	3	9
Taxi drivers and chauffeurs	12	3	9
Other transportation workers	3	–	–
Material moving workers	48	14	34
Industrial truck and tractor operators	7	–	5
Industrial truck and tractor operators	7	–	5
Laborers and material movers, hand	30	8	22
Laborers and freight, stock, and material movers, hand	28	8	20
Refuse and recyclable material collectors	6	–	5
Refuse and recyclable material collectors	6	–	5
Military occupations	7	7	–
Industry[15] (NAICS)			
Private industry	762	247	515
Goods producing	430	122	308
Natural resources and mining	104	31	73
Agriculture, forestry, fishing and hunting	82	19	63
Crop production	44	9	35
Vegetable and melon farming	11	–	9
Potato farming	4	–	3
Other vegetable (except potato) and melon farming	4	–	4
Fruit and tree nut farming	10	4	6
Noncitrus fruit and tree nut farming	8	3	5
Other noncitrus fruit farming	3	–	3
Greenhouse, nursery, and floriculture production	6	–	5
Nursery and floriculture production	4	–	–
Nursery and tree production	4	–	–
Other crop farming	10	–	9
Sugarcane farming	5	–	5
Animal production	16	3	13
Cattle ranching and farming	13	–	11
Beef cattle ranching and farming, including feedlots	5	–	5
Beef cattle ranching and farming	4	–	4
Dairy cattle and milk production	6	–	4
Forestry and logging	4	–	–
Logging	4	–	–
Logging	4	–	–
Fishing, hunting and trapping	5	–	5
Fishing	4	–	4
Fishing	4	–	4

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Industry[15] (NAICS) - continued			
Support activities for agriculture and forestry	11	5	6
Support activities for crop production	10	–	6
Support activities for crop production	10	–	6
Farm labor contractors and crew leaders	6	–	3
Mining	22	12	10
Mining (except oil and gas)	6	–	4
Nonmetallic mineral mining and quarrying	5	–	4
Sand, gravel, clay, and ceramic and refractory minerals mining and quarrying	3	–	3
Support activities for mining	16	10	6
Support activities for mining	16	10	6
Support activities for mining	16	10	6
Drilling oil and gas wells	4	–	–
Support activities for oil and gas operations	12	8	4
Construction	261	71	190
Construction	261	71	190
Construction of buildings	52	15	37
Residential building construction	26	7	19
Residential building construction	26	7	19
New single-family housing construction (except operative builders)	13	4	9
New mult if amily housing construction (except operative builders)	4	–	3
Residential remodelers	5	–	4
Nonresidential building construction	23	8	15
Industrial building construction	7	–	5
Commercial and institutional building construction	15	5	10
Heavy and civil engineering construction	57	21	36
Utility system construction	25	9	16
Water and sewer line and related structures construction	16	5	11
Power and communication line and related structures construction	7	4	3
Highway, street, and bridge construction	28	9	19
Highway, street, and bridge construction	28	9	19
Other heavy and civil engineering construction	4	3	–
Other heavy and civil engineering construction	4	3	–
Specialty trade contractors	147	33	114
Foundation, structure, and building exterior contractors	64	12	52
Poured concrete foundation and structure contractors	7	–	6
Nonresidential concrete foundation and structure contractors	3	–	–
Structural steel and precast concrete contractors	6	3	3
Nonresidential structural steel and precast concrete contractors	3	–	–
Framing contractors	10	3	7
Residential framing contractors	7	–	5
Masonry contractors	11	–	9
Residential masonry contractors	3	–	–
Nonresidential masonry contractors	3	–	3
Roofing contractors	21	–	19
Residential roofing contractors	9	–	9
Siding contractors	5	–	5
Other foundation, structure, and building exterior contractors	4	–	3
Building equipment contractors	24	12	12
Electrical contractors	16	9	7
Nonresidential electrical contractors	8	6	–
Plumbing, heating, and air-conditioning contractors	5	–	3
Other building equipment contractors	3	–	–
Building finishing contractors	31	6	25
Drywall and insulation contractors	10	3	7
Residential drywall and insulation contractors	6	–	4
Painting and wall covering contractors	16	–	14
Residential painting and wall covering contractors	7	–	6
Nonresidential painting and wall covering contractors	3	–	3
Other specialty trade contractors	26	3	23

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Industry[15] (NAICS) - continued			
Site preparation contractors	13	–	11
Nonresidential site preparation contractors	7	–	5
All other specialty trade contractors	13	–	12
Residential all other specialty trade contractors	6	–	6
Nonresidential all other specialty trade contractors	4	–	3
Manufacturing	65	20	45
Manufacturing	65	20	45
Food manufacturing	15	6	9
Fruit and vegetable preserving and specialty food manufacturing	3	–	–
Animal slaughtering and processing	3	–	–
Animal slaughtering and processing	3	–	–
Wood product manufacturing	3	–	3
Paper manufacturing	3	–	3
Converted paper product manufacturing	3	–	3
Chemical manufacturing	3	–	3
Plastics and rubber products manufacturing	6	–	6
Plastics product manufacturing	6	–	6
Nonmetallic mineral product manufacturing	10	–	8
Cement and concrete product manufacturing	6	–	5
Ready-mix concrete manufacturing	3	–	–
Other nonmetallic mineral product manufacturing	3	–	–
All other nonmetallic mineral product manufacturing	3	–	–
Primary metal manufacturing	6	–	4
Foundries	3	–	–
Ferrous metal foundries	3	–	–
Steel foundries (except investment)	3	–	–
Fabricated metal product manufacturing	7	3	4
Transportation equipment manufacturing	3	–	–
Service-Providing	332	125	207
Trade, transportation, and utilities	139	70	69
Wholesale trade	22	14	8
Merchant wholesalers, durable goods	14	8	6
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	3	–	–
Miscellaneous durable goods merchant wholesalers	6	5	–
Recyclable material merchant wholesalers	5	4	–
Merchant wholesalers, nondurable goods	7	5	–
Retail trade	34	15	19
Motor vehicle and parts dealers	4	3	–
Automotive parts, accessories, and tire stores	3	–	–
Building material and garden equipment and supplies dealers	6	–	5
Building material and supplies dealers	3	–	–
Lawn and garden equipment and supplies stores	3	–	3
Food and beverage stores	11	4	7
Grocery stores	8	3	5
Supermarkets and other grocery (except convenience) stores	4	–	–
General merchandise stores	4	3	–
Miscellaneous store retailers	3	–	–
Nonstore retailers	3	–	–
Direct selling establishments	3	–	–
Other direct selling establishments	3	–	–
Transportation and warehousing	82	40	42
Air transportation	3	–	–
Nonscheduled air transportation	3	–	–
Nonscheduled air transportation	3	–	–
Truck transportation	52	25	27

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Industry[15] (NAICS) - continued			
General freight trucking	33	18	15
General freight trucking, local	6	3	3
General freight trucking, long-distance	23	13	10
General freight trucking, long-distance, truckload	18	9	9
Specialized freight trucking	14	6	8
Used household and office goods moving	4	–	–
Specialized freight (except used goods) trucking, local	9	4	5
Transit and ground passenger transportation	12	3	9
Taxi and limousine service	12	3	9
Taxi service	11	3	8
Support activities for transportation	4	3	–
Support activities for road transportation	3	3	–
Warehousing and storage	7	6	–
Warehousing and storage	7	6	–
General warehousing and storage	6	5	–
Information	5	4	–
Information	5	4	–
Telecommunications	3	3	–
Financial activities	14	6	8
Real estate and rental and leasing	13	6	7
Real estate	10	5	5
Lessors of real estate	4	–	–
Lessors of residential buildings and dwellings	4	–	–
Activities related to real estate	5	3	–
Real estate property managers	5	3	–
Residential property managers	3	–	–
Rental and leasing services	3	–	–
Professional and business services	88	15	73
Professional and technical services	5	4	–
Professional and technical services	5	4	–
Architectural, engineering, and related services	3	3	–
Administrative and waste services	83	11	72
Administrative and support services	65	6	59
Employment services	3	–	–
Investigation and security services	7	–	6
Investigation, guard, and armored car services	7	–	6
Security guards and patrol services	7	–	6
Services to buildings and dwellings	53	4	49
Janitorial services	6	–	5
Landscaping services	44	–	42
Waste management and remediation services	18	5	13
Waste collection	8	4	4
Waste collection	8	4	4
Solid waste collection	7	4	3
Remediation and other waste management services	7	–	6
Remediation services	3	–	3
Educational and health services	11	4	7
Health care and social assistance	9	4	5
Ambulatory health care services	3	–	–
Hospitals	3	–	–
General medical and surgical hospitals	3	–	–
General medical and surgical hospitals	3	–	–

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Industry[15] (NAICS) - continued			
Leisure and hospitality	48	15	33
Arts, entertainment, and recreation	9	4	5
Performing arts, spectator sports, and related industries	4	–	3
Spectator sports	3	–	3
Spectator sports	3	–	3
Amusement, gambling, and recreation industries	4	–	–
Other amusement and recreation industries	3	–	–
Accommodation and food services	39	11	28
Accommodation	6	–	4
Traveler accommodation	6	–	4
Hotels (except casino hotels) and motels	6	–	4
Food services and drinking places	32	8	24
Full-service restaurants	9	3	6
Full-service restaurants	9	3	6
Limited-service eating places	12	3	9
Limited-service eating places	12	3	9
Limited-service restaurants	8	–	6
Special food services	5	–	5
Mobile food services	4	–	4
Drinking places (alcoholic beverages)	6	–	4
Drinking places (alcoholic beverages)	6	–	4
Other services, except public administration	26	11	15
Other services, except public administration	26	11	15
Repair and maintenance	17	6	11
Automotive repair and maintenance	15	5	10
Automotive mechanical and electrical repair and maintenance	8	3	5
General automotive repair	6	3	3
Automotive body, paint, interior, and glass repair	4	–	3
Automotive body, paint, and interior repair and maintenance	4	–	3
Personal and laundry services	7	4	3
Drycleaning and laundry services	3	–	–
Government[16]	32	28	4
Federal government (including resident armed forces)	8	8	–
Service-Providing	8	8	–
Public administration	8	8	–
Public administration	8	8	–
National security and international affairs	8	8	–
National security and international affairs	8	8	–
National security	8	8	–
State government	3	–	–
Local government	21	18	3
Goods producing	3	–	–
Construction	3	–	–
Construction	3	–	–
Heavy and civil engineering construction	3	–	–
Highway, street, and bridge construction	3	–	–
Highway, street, and bridge construction	3	–	–

See footnotes at end of table.

TABLE F-2. **Fatal occupational injuries to workers of Hispanic or Latino ethnicity[1] by selected characteristics, 2003 — Continued**

Characteristics	Hispanic or Latino[1]		
	Total fatalities (number)	Country of origin	
		Native-born	Foreign-born
Industry[15] (NAICS) - continued			
Service-Providing	18	16	–
Public administration	12	11	–
Public administration	12	11	–
Justice, public order, and safety activities	10	9	–
Justice, public order, and safety activities	10	9	–
Police protection	10	9	–

[1] Persons identified as Hispanic may be of any race.
[2] May include volunteers and other workers receiving compensation.
[3] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[4] May include fatalities that occurred in structures that do not meet the definition of permit required confined spaces as defined by Occupational Safety and Health Administration regulations. Excludes fatalities from trench cave-ins and from being caught in collapsing materials.
[5] The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.
[6] The secondary source of injury, if any, identifies the object, substance, or person that generated the source of injury or that contributed to the event or exposure. For vehicle collisions, the deceased's vehicle is the primary source and the other object (truck, road, divider, etc.) is the secondary source. For most homicides, the "bullet" is the primary source and the "perpetrator" is the secondary source. The category "Robber" was instituted beginning with 1997 data, which was partial year reporting.
[7] Includes walking, sitting, running, and climbing ladders or stairs.
[8] The road construction location category was implemented in 1995.
[9] Primarily includes outdoor areas such as bodies of water, woods, noncultivated fields, and parking lots.
[10] Buildings and adjacent grounds used by the general public or a particular group, such as hotels, restaurants, stores, office buildings, courthouses, and schools.
[11] Private residence fatalities primarily occurred to repair or maintenance workers, police while on duty, firefighters, or residential construction workers.
[12] The residential construction location category was implemented in 1998.
[13] Includes children's home, dormitory, hospital, jail, nursing home, and reform school.
[14] Data are classified according to the 2000 Standard Occupational Classification System.
[15] Data are classified according to the 2002 North American Industry Classification System.
[16] Includes fatalities to workers employed by governmental organizations regardless of industry.

NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. n.e.c. means "not elsewhere classified."

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE F-3. **Fatal occupational injuries to youth aged 19 years and under by selected industries[1], US, 2003**

Characteristics	Total fatalities (number)	Industry[1]		
		Agriculture, forestry, fishing and hunting	Construction	Retail trade
Total	137	34	33	11
Employee status				
Wage and salary workers[2]	104	15	31	6
Self-employed[3]	33	19	–	5
Sex				
Men	120	31	33	8
Women	17	3	–	3
Age				
Under 16 years	25	15	–	–
16 to 17 years	28	8	5	3
18 to 19 years	84	11	27	7
Race or ethnic origin[4]				
White	91	30	19	6
Black or African American	9	–	–	–
Hispanic or Latino	31	4	13	–
Asian, Native Hawaiian or Pacific Islander	5	–	–	–
Event or exposure				
Transportation incidents	63	20	8	5
Highway	33	5	8	–
Collision between vehicles, mobile equipment	14	–	–	–
Moving in opposite directions, oncoming	9	–	–	–
Moving in intersection	5	–	–	–
Vehicle struck stationary object or equipment on side of road	9	–	–	–
Noncollision	10	–	–	–
Jack-knifed or overturned--no collision	8	–	–	–
Nonhighway (farm, industrial premises)	16	7	–	3
Vehicle, mobile equipment struck stationary object	3	–	–	–
Noncollision accident	12	5	–	3
Fell from and struck by vehicle, mobile equipment	3	–	–	–
Overturned	9	4	–	3
Worker struck by vehicle, mobile equipment	9	4	–	–
Worker struck by vehicle, mobile equipment in roadway	4	–	–	–
Worker struck by vehicle, mobile equipment in parking lot or non-road area	4	3	–	–
Assaults and violent acts	15	3	–	5
Homicides	11	–	–	5
Shooting	8	–	–	3
Suicide, self-inflicted injury	3	–	–	–
Contact with objects and equipment	32	6	11	–
Struck by object	17	–	4	–
Struck by falling object	12	–	3	–
Caught in or compressed by equipment or objects	10	4	3	–
Caught in running equipment or machinery	5	–	–	–
Caught in or crushed in collapsing materials	5	–	4	–
Excavation or trenching cave-in	4	–	4	–
Falls	10	–	7	–
Fall to lower level	10	–	7	–
Fall from roof	4	–	4	–

See footnotes at end of table.

TABLE F-3. **Fatal occupational injuries to youth aged 19 years and under by selected industries[1], US, 2003 — Continued**

Characteristics	Total fatalities (number)	Industry[1]		
		Agriculture, forestry, fishing and hunting	Construction	Retail trade
Event or exposure - continued				
Fall to lower level, n.e.c.	3	–	–	–
Exposure to harmful substances or environments	14	–	6	–
Contact with electric current	8	–	6	–
Contact with overhead power lines	5	–	4	–
Oxygen deficiency	4	–	–	–
Fires and explosions	3	–	–	–
Primary and secondary source				
Primary source[5]				
Vehicles	64	18	9	5
Highway vehicle, motorized	42	8	9	–
Automobile	12	–	–	–
Truck	26	6	9	–
Dump truck	4	–	–	–
Pickup truck	11	3	6	–
Semitrailer, tractor trailer, trailer truck	4	–	–	–
Offroad vehicle, nonindustrial	4	–	–	–
All terrain vehicle (ATV)	3	–	–	–
Plant and industrial powered vehicles, tractors	12	6	–	3
Forklift	5	–	–	3
Tractor	7	6	–	–
Water vehicle	3	–	–	–
Structures and surfaces	16	–	11	–
Floors, walkways, ground surfaces	10	–	8	–
Ground	5	–	4	–
Structures	4	–	3	–
Machinery	13	5	3	–
Agricultural and garden machinery	4	4	–	–
Construction, logging, and mining machinery	3	–	–	–
Material handling (cranes, conveyers, jacks)	5	–	–	–
Cranes	3	–	–	–
Parts and materials	12	–	6	–
Building materials--solid elements	6	–	–	–
Pipes, ducts, tubing	3	–	–	–
Machine, tool, and electrical parts	4	–	–	–
Electric parts	3	–	–	–
Persons, plants, animals, and minerals	7	–	–	–
Plants, trees, vegetation--not processed	3	–	–	–
Trees, logs	3	–	–	–
Tools, instruments, and equipment	3	–	–	–
Other	19	–	–	4
Ammunition	10	–	–	3
Bullets	10	–	–	3
Atmospheric and environmental conditions	6	–	–	–
Secondary source[6]				
Vehicles	19	4	5	–
Highway vehicle, motorized	19	4	5	–
Automobile	3	–	–	–

See footnotes at end of table.

TABLE F-3. **Fatal occupational injuries to youth aged 19 years and under by selected industries[1], US, 2003 — Continued**

Characteristics	Total fatalities (number)	Industry[1]		
		Agriculture, forestry, fishing and hunting	Construction	Retail trade
Primary and secondary source - continued				
Secondary source[6] - continued				
Truck	14	4	5	–
Semitrailer, tractor trailer, trailer truck	7	–	5	–
Structures and surfaces	22	3	9	–
Floors, walkways, ground surfaces	9	–	–	–
Ground	4	–	–	–
Other structural elements	6	–	3	–
Structures	7	–	3	–
Towers, poles	4	–	–	–
Machinery	7	–	–	–
Material handling (cranes, conveyers, jacks)	5	–	–	–
Parts and materials	8	–	5	–
Machine, tool, and electrical parts	6	–	4	–
Electric parts	6	–	4	–
Power lines, transformers, convertors	4	–	3	–
Persons, plants, animals, and minerals	17	–	–	5
Person--other than injured or ill worker	11	–	–	5
Robber	5	–	–	3
Plants, trees, vegetation--not processed	5	–	–	–
Trees, logs	5	–	–	–
Tools, instruments, and equipment	3	–	–	–
Other	4	3	–	–
Not reported	52	17	9	–
Nature				
Traumatic injuries to bones, nerves, spinal cord	6	–	3	–
Multiple traumatic injuries to bones, nerves, spinal cord	6	–	3	–
Open wounds	10	–	–	3
Gunshot wounds	10	–	–	3
Intracranial injuries	45	7	18	–
Multiple intracranial injuries	32	4	12	–
Multiple traumatic injuries and disorders	30	8	5	–
Intracranial injuries and injuries to internal organs	13	4	4	–
Other combinations of traumatic injuries	6	–	–	–
Other traumatic injuries and disorders	43	16	7	5
Asphyxiations/strangulations, suffocations	10	7	–	–
Drownings	5	3	–	–
Electrocutions, electric shocks	8	–	6	–
Internal injuries to organs and blood vessels of the trunk	19	5	–	5
Part of body				
Head	50	7	18	4
Cranial region, including skull	45	7	18	–
Brain	45	7	18	–

See footnotes at end of table.

TABLE F-3. **Fatal occupational injuries to youth aged 19 years and under by selected industries[1], US, 2003 — Continued**

Characteristics	Total fatalities (number)	Industry[1]		
		Agriculture, forestry, fishing and hunting	Construction	Retail trade
Part of body - continued				
Neck, including throat	4	–	–	–
Neck, except internal location of diseases or disorders	4	–	–	–
Trunk	23	6	–	5
Chest, including ribs, internal organs	17	5	–	4
Multiple trunk locations	5	–	–	–
Body systems	25	11	7	–
Multiple body parts	35	9	6	–
Worker activity				
Vehicular and transportation operations	62	21	8	4
Driving, operating	30	5	5	3
Automobile	6	–	–	–
Truck	13	–	5	–
Industrial or construction vehicle	4	–	–	–
Riding in, on	15	4	–	–
Truck	4	–	–	–
Walking in or near roadway, etc., n.e.c.	5	–	–	–
Vehicular and transportation operations, n.e.c.	9	9	–	–
Driving, operating farm vehicle	8	8	–	–
Using or operating tools, machinery	9	–	–	–
Constructing, repairing, cleaning	33	–	20	–
Construction, assembling, dismantling	17	–	15	–
Constructing, assembling	7	–	7	–
Installing	7	–	7	–
Repair, maintenance	8	–	3	–
Repairing	3	–	–	–
Cleaning, washing	4	–	–	–
Materials handling operations	8	–	–	–
Loading, unloading (packing, unpacking) materials	3	–	–	–
Physical activity[7], n.e.c.	12	–	–	3
All other activities	12	6	–	3
Tending a retail establishment	3	–	–	3
Activity, n.e.c.	7	4	–	–
Location				
Street or highway	40	8	8	–
Other highway (State or U.S.)	17	3	4	–
Local road or street	17	4	–	–
Industrial place or premise	29	–	13	–
Construction site	11	–	10	–
Factory, plant	3	–	–	–
Industrial place or premises, nec	4	–	–	–
Other specified place[8]	11	–	–	–
River	3	–	–	–
Public building[9]	9	–	–	5
Convenience store	3	–	–	3

See footnotes at end of table.

TABLE F-3. **Fatal occupational injuries to youth aged 19 years and under by selected industries[1], US, 2003 — Continued**

Characteristics	Total fatalities (number)	Industry[1]		
		Agriculture, forestry, fishing and hunting	Construction	Retail trade
Location - continued				
Restaurant, cafe	3	–	–	–
Farm	26	24	–	–
Farm, unspecified	8	7	–	–
Farm buildings	5	5	–	–
Farm land under cultivation, fields, meadows	8	7	–	–
Silos, grain bin	4	4	–	–
Private residence[10]	17	–	10	–
Residential construction[11]	8	–	7	–
Place for recreation and sport	3	–	–	–
Recreational and sports areas	3	–	–	–
Occupation[12]				
Management occupations	7	6	–	–
Other management occupations	7	6	–	–
Agricultural managers	6	6	–	–
Farmers and ranchers	6	6	–	–
Protective service occupations	5	–	–	–
Fire fighting and prevention workers	4	–	–	–
Fire fighters	4	–	–	–
Building and grounds cleaning and maintenance occupations	9	–	–	–
Grounds maintenance workers	7	–	–	–
Landscaping and groundskeeping workers	6	–	–	–
Personal care and service occupations	5	–	–	–
Other personal care and service workers	3	–	–	–
Sales and related occupations	6	–	–	4
Retail sales workers	4	–	–	3
Cashiers	3	–	–	–
Office and administrative support occupations	3	–	–	–
Farming, fishing, and forestry occupations	25	25	–	–
Agricultural workers	21	21	–	–
Miscellaneous agricultural workers	20	20	–	–
Farmworkers and laborers, crop, nursery, and greenhouse	10	10	–	–
Farmworkers, farm and ranch animals	9	9	–	–
Construction and extraction occupations	39	–	33	–
Construction trades workers	24	–	23	–
Construction laborers	14	–	14	–
Helpers, construction trades	9	–	9	–
Helpers--brickmasons, blockmasons, stonemasons, and tile and marble setters	3	–	3	–
Extraction workers	5	–	–	–
Roustabouts, oil and gas	3	–	–	–
Installation, maintenance, and repair occupations	3	–	–	–
Production occupations	3	–	–	–
Transportation and material moving occupations	23	–	–	5
Motor vehicle operators	9	–	–	–
Driver/sales workers and truck drivers	9	–	–	–
Driver/sales workers	3	–	–	–

See footnotes at end of table.

TABLE F-3. **Fatal occupational injuries to youth aged 19 years and under by selected industries[1], US, 2003 — Continued**

Characteristics	Total fatalities (number)	Industry[1]		
		Agriculture, forestry, fishing and hunting	Construction	Retail trade
Occupation[12] - continued				
Truck drivers, heavy and tractor-trailer	4	–	–	–
Material moving workers	11	–	–	3
Industrial truck and tractor operators	3	–	–	–
Laborers and material movers, hand	7	–	–	–
Laborers and freight, stock, and material movers, hand	7	–	–	–
Military Occupations	5	–	–	–

1 Data are classified according to the 2002 North American Industry Classification System.
2 May include volunteers and other workers receiving compensation.
3 Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
4 Persons identified as Hispanic may be of any race. The individual racial categories shown exclude data for Hispanics.
5 The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.
6 The secondary source of injury, if any, identifies the object, substance, or person that generated the source of injury or that contributed to the event or exposure. For vehicle collisions, the deceased's vehicle is the primary source and the other object (truck, road divider, etc.) is the secondary source. For most homicides, the "bullet" is the primary source and the "perpetrator" is the secondary source.
7 Includes walking, sitting, running, and climbing ladders or stairs.
8 Primarily includes outdoor areas such as bodies of water, woods, noncultivated fields, and parking lots.
9 Buildings and adjacent grounds used by the general public or a particular group, such as hotels, restaurants, stores, office buildings, courthouses, and schools.
10 Private residence fatalities primarily occurred to repair or maintenance workers, police while on duty, firefighters, or residential construction workers.
11 The residential construction location category was implemented in 1998.
12 Data are classified according to the 2000 Standard Occupational Classification system.
NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. n.e.c. means "not elsewhere classified."
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, US, 2003**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Total	273	65	13	46	102	43
Employee status						
Wage and salary workers[2]	188	49	9	36	64	27
Self-employed[3]	85	16	4	10	38	16
Sex						
Men	268	64	12	46	100	42
Women	5	–	–	–	–	–
Age						
18 to 19 years	8	–	–	3	–	–
20 to 24 years	30	11	–	5	9	5
25 to 34 years	69	20	–	14	18	14
35 to 44 years	72	11	7	14	23	15
45 to 54 years	48	11	–	8	23	3
55 to 64 years	29	7	–	–	16	3
65 and over	17	3	–	–	12	–
Race or ethnic origin[4]						
White	181	48	9	29	65	27
Black or African American	15	5	–	–	4	–
Hispanic or Latino	72	10	3	14	31	14
Asian, Native Hawaiian or Pacific Islander	3	–	–	–	–	–
Event or exposure						
Transportation incidents	65	65	–	–	–	–
Highway	34	34	–	–	–	–
Collision between vehicles, mobile equipment	17	17	–	–	–	–
Moving in same direction	6	6	–	–	–	–
Moving in opposite directions, oncoming	3	3	–	–	–	–
Moving in intersection	5	5	–	–	–	–
Vehicle struck stationary object or equipment on side of road	7	7	–	–	–	–
Noncollision	9	9	–	–	–	–
Jack-knifed or overturned--no collision	7	7	–	–	–	–
Nonhighway (farm, industrial premises)	16	16	–	–	–	–
Noncollision accident	13	13	–	–	–	–
Fell from and struck by vehicle, mobile equipment	3	3	–	–	–	–
Overturned	8	8	–	–	–	–
Worker struck by vehicle, mobile equipment	9	9	–	–	–	–
Worker struck by vehicle, mobile equipment in roadway	3	3	–	–	–	–
Worker struck by vehicle, mobile equipment in parking lot or non-road area	6	6	–	–	–	–
Assaults and violent acts	13	–	13	–	–	–
Homicides	8	–	8	–	–	–

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Event or exposure - continued						
Shooting	7	–	7	–	–	–
Suicide, self-inflicted injury	5	–	5	–	–	–
Contact with objects and equipment	46	–	–	46	–	–
Struck by object	18	–	–	18	–	–
Struck by falling object	11	–	–	11	–	–
Caught in or compressed by equipment or objects	6	–	–	6	–	–
Caught in running equipment or machinery	6	–	–	6	–	–
Caught in or crushed in collapsing materials	21	–	–	21	–	–
Excavation or trenching cave-in	11	–	–	11	–	–
Caught in or crushed in collapsing structure	10	–	–	10	–	–
Falls	102	–	–	–	102	–
Fall to lower level	100	–	–	–	100	–
Fall down stairs or steps	3	–	–	–	3	–
Fall from floor, dock, or ground level	15	–	–	–	15	–
Fall through existing floor opening	9	–	–	–	9	–
Fall from ground level to lower level	3	–	–	–	3	–
Fall from ladder	14	–	–	–	14	–
Fall from roof	38	–	–	–	38	–
Fall from roof edge	23	–	–	–	23	–
Fall from scaffold, staging	15	–	–	–	15	–
Fall from nonmoving vehicle	4	–	–	–	4	–
Fall to lower level, n.e.c.	7	–	–	–	7	–
Exposure to harmful substances or environments	43	–	–	–	–	43
Contact with electric current	27	–	–	–	–	27
Contact with wiring, transformers, or other electrical component	10	–	–	–	–	10
Contact with overhead power lines	15	–	–	–	–	15
Exposure to caustic, noxious, or allergenic substances	14	–	–	–	–	14
Inhalation of substance	9	–	–	–	–	9
Inhalation in open or nonconfined space	8	–	–	–	–	8
Ingestion of substance	4	–	–	–	–	4
Fires and explosions	4	–	–	–	–	–
Primary and secondary source						
Primary source[5]						
Vehicles	57	55	–	–	–	–
Highway vehicle, motorized	43	42	–	–	–	–
Truck	33	32	–	–	–	–
Dump truck	4	4	–	–	–	–
Pickup truck	17	17	–	–	–	–
Van--passenger or light delivery	6	6	–	–	–	–
Plant and industrial powered vehicles, tractors	10	9	–	–	–	–
Forklift	7	6	–	–	–	–
Tractor	3	3	–	–	–	–

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Primary and secondary source - continued						
Primary source[5] - continued						
Structures and surfaces	116	–	–	16	97	–
Floors, walkways, ground surfaces	98	–	–	4	94	–
Floors	30	–	–	–	30	–
Ground	42	–	–	–	42	–
Sidewalks, paths, outdoor walkways	5	–	–	–	5	–
Street, road	4	–	–	–	4	–
Surfaces below ground level, n.e.c.	5	–	–	4	–	–
Ditches, channels, trenches, excavations	4	–	–	4	–	–
Other structural elements	12	–	–	10	–	–
Roof	3	–	–	3	–	–
Walls	6	–	–	6	–	–
Structures	6	–	–	–	–	–
Machinery	25	10	–	10	–	4
Construction, logging, and mining machinery	19	10	–	7	–	–
Excavating machinery	8	4	–	3	–	–
Backhoes	3	–	–	–	–	–
Loaders	8	4	–	3	–	–
Front end loaders	5	4	–	–	–	–
Material handling (cranes, conveyers, jacks)	5	–	–	3	–	–
Cranes	4	–	–	–	–	–
Parts and materials	21	–	4	8	–	8
Building materials--solid elements	6	–	–	4	–	–
Machine, tool, and electrical parts	12	–	–	–	–	8
Electric parts	11	–	–	–	–	8
Electrical wiring	8	–	–	–	–	6
Persons, plants, animals, and minerals	9	–	–	8	–	–
Nonmetallic minerals, except fuel	7	–	–	7	–	–
Dirt, earth	7	–	–	7	–	–
Chemicals and chemical products	15	–	–	–	–	13
Chemical products--general	6	–	–	–	–	6
Drugs, alcohol, medicines	5	–	–	–	–	5
Other chemicals	8	–	–	–	–	6
Oxygen and oxygen compounds, n.e.c.	8	–	–	–	–	6
Carbon monoxide	8	–	–	–	–	6
Tools, instruments, and equipment	9	–	–	–	–	9
Ladders	8	–	–	–	–	8
Ladders--movable	8	–	–	–	–	8
Extension ladders	7	–	–	–	–	7
Containers	8	–	–	3	–	–
Containers-nonpressurized	4	–	–	–	–	–
Other	13	–	7	–	–	3
Ammunition	7	–	7	–	–	–
Bullets	7	–	7	–	–	–
Atmospheric and environmental conditions	5	–	–	–	–	3

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Primary and secondary source - continued						
Secondary source[6]						
Vehicles	26	19	–	3	3	–
Highway vehicle, motorized	21	17	–	–	–	–
Automobile	4	4	–	–	–	–
Truck	15	11	–	–	–	–
Semitrailer, tractor trailer, trailer truck	7	6	–	–	–	–
Plant and industrial powered vehicles, tractors	3	–	–	–	–	–
Forklift	3	–	–	–	–	–
Structures and surfaces	92	12	–	–	75	–
Floors, walkways, ground surfaces	23	4	–	–	18	–
Floors	12	–	–	–	12	–
Ground	6	4	–	–	–	–
Other structural elements	45	4	–	–	40	–
Roof	31	–	–	–	31	–
Walls	4	3	–	–	–	–
Structures	24	4	–	–	17	–
Buildings--office, plant, residential	8	–	–	–	4	–
Scaffolds, staging	13	–	–	–	13	–
Machinery	6	–	–	3	–	–
Construction, logging, and mining machinery	3	–	–	–	–	–
Loaders	3	–	–	–	–	–
Parts and materials	24	–	–	–	–	20
Building materials--solid elements	3	–	–	–	–	–
Machine, tool, and electrical parts	21	–	–	–	–	20
Electric parts	21	–	–	–	–	20
Power lines, transformers, convertors	15	–	–	–	–	15
Persons, plants, animals, and minerals	15	6	8	–	–	–
Person--other than injured or ill worker	8	–	8	–	–	–
Plants, trees, vegetation--not processed	7	6	–	–	–	–
Trees, logs	7	6	–	–	–	–
Tools, instruments, and equipment	17	–	–	–	14	–
Ladders	15	–	–	–	14	–
Ladders--movable	8	–	–	–	8	–
Extension ladders	6	–	–	–	6	–
Other	8	3	–	3	–	–
Steam, vapors, liquids	4	3	–	–	–	–
Liquids	4	3	–	–	–	–
Water	4	3	–	–	–	–
Not reported	82	24	4	33	3	17
Nature						
Traumatic injuries to bones, nerves, spinal cord	11	–	–	–	8	–
Traumatic injuries to spinal cord	3	–	–	–	–	–
Multiple traumatic injuries to bones, nerves, spinal cord	6	–	–	–	4	–

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Nature - continued						
Open wounds	10	–	7	–	–	–
Gunshot wounds	7	–	7	–	–	–
Intracranial injuries	82	14	–	13	54	–
Cerebral hemorrhages	3	–	–	–	3	–
Multiple intracranial injuries	57	9	–	9	38	–
Multiple traumatic injuries and disorders	78	33	–	13	30	–
Intracranial injuries and injuries to internal organs	29	14	–	5	10	–
Other combinations of traumatic injuries	13	4	–	3	6	–
Other traumatic injuries and disorders	88	15	5	17	9	41
Asphyxiations/strangulations, suffocations	12	–	3	7	–	–
Drownings	4	4	–	–	–	–
Electrocutions, electric shocks	27	–	–	–	–	27
Internal injuries to organs and blood vessels of the trunk	29	9	–	10	9	–
Other poisonings and toxic effects	16	–	–	–	–	14
Other poisonings and toxic effects, n.e.c.	14	–	–	–	–	12
Part of body						
Head	82	14	–	13	54	–
Cranial region, including skull	82	14	–	13	54	–
Brain	82	14	–	13	54	–
Neck, including throat	7	–	–	–	4	–
Neck, except internal location of diseases or disorders	7	–	–	–	4	–
Trunk	41	10	5	12	13	–
Chest, including ribs, internal organs	21	7	–	5	5	–
Back, including spine, spinal cord	3	–	–	–	3	–
Abdomen	4	–	–	–	–	–
Multiple trunk locations	11	3	–	5	3	–
Body systems	59	6	5	6	–	42
Multiple body parts	81	33	–	13	29	–
Worker activity						
Vehicular and transportation operations	61	58	–	–	–	–
Driving, operating	44	42	–	–	–	–
Truck	21	21	–	–	–	–
Industrial or construction vehicle	15	13	–	–	–	–
Riding in, on	9	9	–	–	–	–
Truck	5	5	–	–	–	–
Directing, flagging traffic	3	3	–	–	–	–
Using or operating tools, machinery	16	–	–	6	3	5
Operating heavy equipment	8	–	–	3	–	–
Earth moving machinery	3	–	–	–	–	–
Operating machinery	3	–	–	–	–	–

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Worker activity - continued						
Constructing, repairing, cleaning	153	–	4	31	83	30
Construction, assembling, dismantling	101	–	3	23	58	15
Constructing, assembling	34	–	–	8	20	6
Installing	38	–	–	8	21	5
Dismantling, removing	5	–	–	3	–	–
Repair, maintenance	20	–	–	4	7	7
Repairing	15	–	–	3	6	4
Cleaning, washing	6	–	–	–	–	–
Painting, etc.	15	–	–	–	10	4
Materials handling operations	15	3	–	5	4	3
Carrying materials	6	–	–	–	3	3
Loading, unloading (packing, unpacking) materials	6	–	–	3	–	–
Materials handling, n.e.c.	3	–	–	–	–	–
Physical activity[7], n.e.c.	12	–	–	–	7	–
All other activities	16	–	7	–	4	5
Activity, n.e.c.	13	–	4	–	4	5
Location						
Street or highway	39	38	–	–	–	–
Street and highway, unspecified	3	3	–	–	–	–
Interstate, freeway, or expressway	6	6	–	–	–	–
Other highway (State or U.S.)	17	17	–	–	–	–
Local road or street	10	10	–	–	–	–
Industrial place or premise	41	7	–	15	14	4
Construction site	31	–	–	13	13	3
Industrial place or premises, nec	5	3	–	–	–	–
Other specified place[8]	10	6	–	–	–	–
Parking lot, garage (employer's premises)	5	–	–	–	–	–
Public building[9]	7	–	–	–	–	–
Office building	5	–	–	–	–	–
Farm	3	–	–	–	–	–
Private residence[10]	168	12	8	29	79	38
Apartment	5	–	–	–	3	–
Residential construction[11]	132	11	5	26	63	26
Unspecified place	3	–	–	–	–	–
Occupation (SOC)[12]						
Management occupations	18	7	–	–	4	3
Other management occupations	16	7	–	–	4	3
Construction managers	16	7	–	–	4	3
Construction and extraction occupations	231	47	10	43	91	37

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Occupation (SOC)[12] - continued						
Supervisors, construction and extraction workers	25	11	–	3	7	–
First-line supervisors/managers of construction trades and extraction workers	25	11	–	3	7	–
Construction trades workers	197	33	8	39	80	34
Carpenters	43	3	–	8	28	–
Cement masons, concrete finishers, and terrazzo workers	3	–	–	–	–	–
Cement masons and concrete finishers	3	–	–	–	–	–
Construction laborers	73	17	–	23	20	12
Construction equipment operators	8	6	–	–	–	–
Operating engineers and other construction equipment operators	7	6	–	–	–	–
Drywall installers, ceiling tile installers, and tapers	9	–	–	–	5	–
Drywall and ceiling tile installers	9	–	–	–	5	–
Electricians	5	–	–	–	–	3
Painters and paperhangers	19	–	–	–	9	8
Painters, construction and maintenance	19	–	–	–	9	8
Pipelayers, plumbers, pipefitters, and steamfitters	11	–	–	4	3	–
Plumbers, pipefitters, and steamfitters	11	–	–	4	3	–
Roofers	19	3	–	–	13	–
Helpers, construction trades	6	–	–	–	–	–
Helpers, construction trades, all other	3	–	–	–	–	–
Other construction and related workers	3	–	–	–	–	–
Installation, maintenance, and repair occupations	8	–	–	–	4	–
Other installation, maintenance, and repair occupations	8	–	–	–	4	–
Heating, air conditioning, and refrigeration mechanics and installers	4	–	–	–	–	–
Transportation and material moving occupations	11	8	–	–	3	–
Motor vehicle operators	8	6	–	–	–	–
Driver/sales workers and truck drivers	8	6	–	–	–	–
Truck drivers, heavy and tractor-trailer	6	4	–	–	–	–
Material moving workers	3	–	–	–	–	–
Industry (NAICS)[13]						
Goods producing	273	65	13	46	102	43
Construction	273	65	13	46	102	43
Construction	273	65	13	46	102	43
Construction of buildings	129	32	8	21	50	18
Residential building construction	129	32	8	21	50	18
Residential building construction	129	32	8	21	50	18
New single-family housing construction (except operative builders)	57	17	–	10	20	8

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Industry (NAICS)[13] - continued						
New mult if amily housing construction (except operative builders)	9	–	–	–	4	–
Residential remodelers	29	–	6	4	12	5
Specialty trade contractors	144	33	5	25	52	25
Foundation, structure, and building exterior contractors	55	9	3	7	30	5
Poured concrete foundation and structure contractors	5	–	–	–	–	–
Residential concrete foundation and structure contractors	5	–	–	–	–	–
Framing contractors	11	–	–	–	9	–
Residential framing contractors	11	–	–	–	9	–
Masonry contractors	9	–	–	3	–	–
Residential masonry contractors	9	–	–	3	–	–
Roofing contractors	24	3	–	–	18	–
Residential roofing contractors	24	3	–	–	18	–
Other foundation, structure, and building exterior contractors	3	–	–	–	–	–
Residential other foundation, structure, and building exterior contractors	3	–	–	–	–	–
Building equipment contractors	27	5	–	7	4	8
Electrical contractors	9	–	–	–	–	6
Residential electrical contractors	9	–	–	–	–	6
Plumbing, heating, and air-conditioning contractors	18	5	–	5	4	–
Residential plumbing, heating, and air-conditioning contractors	18	5	–	5	4	–
Building finishing contractors	35	7	–	3	14	10
Drywall and insulation contractors	10	–	–	–	7	–
Residential drywall and insulation contractors	10	–	–	–	7	–
Painting and wall covering contractors	17	–	–	–	7	8
Residential painting and wall covering contractors	17	–	–	–	7	8
Flooring contractors	4	4	–	–	–	–
Residential flooring contractors	4	4	–	–	–	–

See footnotes at end of table.

TABLE F-4. **Fatal occupational injuries to workers in private residential construction industries[1] by major event or exposure and selected characteristics, 2003 — Continued**

Characteristics	Total fatalities (number)	Event or exposure				
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments
Industry (NAICS)[13] - continued						
Other specialty trade contractors	27	12	–	8	4	–
Site preparation contractors	14	4	–	6	–	–
Residential site preparation contractors	14	4	–	6	–	–
All other specialty trade contractors	13	8	–	–	–	–
Residential all other specialty trade contractors	13	8	–	–	–	–

[1] Residential construction industries include building construction industries as well as additional specialty trade contractors that were added by the BLS during the implementation of the North American Industry Classification System.
[2] May include volunteers and other workers receiving compensation.
[3] Includes paid and unpaid family workers, and may include owners of incorporated businesses, or members of partnerships.
[4] Persons identified as Hispanic may be of any race. The individual racial categories shown exclude data for Hispanics.
[5] The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury. For transportation incidents, the source identifies the vehicle in which the deceased was an occupant.
[6] The secondary source of injury, if any, identifies the object, substance, or person that generated the source of injury or that contributed to the event or exposure. For vehicle collisions, the deceased's vehicle is the primary source and the other object (truck, road divider, etc.) is the secondary source. For most homicides, the "bullet" is the primary source and the "perpetrator" is the secondary source.
[7] Includes walking, sitting, running, and climbing ladders or stairs.
[8] Primarily includes outdoor areas such as bodies of water, woods, noncultivated fields, and parking lots.
[9] Buildings and adjacent grounds used by the general public or a particular group, such as hotels, restaurants, stores, office buildings, courthouses, and schools.
[10] Private residence fatalities primarily occurred to repair or maintenance workers, police while on duty, firefighters, or residential construction workers.
[11] The residential construction location category was implemented in 1998.
[12] Data are classified by the 2000 Standard Occupational Classification system.
[13] Data are classified according to the 2002 North American Industry Classification System.
NOTE: Totals for 2003 are revised and final. Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. n.e.c. means "not elsewhere classified."
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries

Appendix G. Census of Fatal Occupational Injuries Work Relationship Criteria

For purposes of the Census of Fatal Occupational Injuries, a **work relationship** exists if an event or exposure results in fatal injury or illness to a person: (1) ON the *employer's premises* and the person was there to *work*; or (2) OFF the *employer's premises* and the person was there to *work*, or the event or exposure was related to the person's *work* or status as an employee.

The *employer's premises* include buildings, grounds, parking lots, and other facilities and property used in the conduct of business. *Work* is defined as a duty, activity, or task that produces a product or service; is done in exchange for money, goods, services, profit, or benefit; and is legal in the United States.

The following are clarifications of the CFOI work relationship criteria:

Volunteer workers who are exposed to the same work hazards and perform the same duties or functions as paid employees, and who meet the CFOI work relationship criteria, are IN the scope of the census.

Institutionalized persons, including inmates of penal and mental institutions, sanitariums, and homes for the aged, infirm, and needy are OUT of scope. Institutionalized persons who are fatally injured or become fatally ill while employed off the premises of their institutions, however, are IN scope.

Suicides and **homicides** that meet the CFOI work relationship criteria are IN scope.

Fatal heart attacks and **strokes** are IN scope, if they occurred ON or OFF the employer's premises and the person was there to work, and a traumatic injury contributed to the cause of death. Those fatal heart attacks and strokes that occurred under other circumstances are OUT of scope, unless work relationship is verified.

Travel status: Fatal events or exposures that occurred when a person was in travel status are IN scope if the travel was for work purposes or was a condition of employment. The exclusion pertaining to recreational activities also applies to a person who was in travel status.

Recreational activities: Fatal events or exposures that occurred during a person's recreational activities, which were not required by the person’s employer, are OUT of scope.

Commuting: Fatal events or exposures that occurred during a person's normal commute to or from work are OUT of scope.

Off-duty police: Homicides occurring to off-duty police officers are generally IN scope. Other fatalities to off duty police are in scope if they are performing a police-related function, such as directing traffic at the scene of an accident or rescuing someone from a fire.

Undocumented workers: Fatalities to undocumented workers are IN scope provided they meet the other work-relationship criteria.

Appendix H. State Census of Fatal Occupational Injuries Agencies, BLS Regional and National Contacts, and Telephone Numbers

State	Agency	Telephone number
Alabama	Department of Labor	(334) 242-3460
Alaska	Department of Labor and Workforce Development	(907) 465-4539
Arizona	Industrial Commission of Arizona	(602) 542-3739
Arkansas	Department of Labor	(501) 682-4542
California	Department of Industrial Relations	(415) 703-4757
Colorado	Department of Public Health and Environment	(303) 692-2173
Connecticut	Labor Department	(860) 263-6933
Delaware	Department of Labor	(302) 761-8221
District of Columbia	State Center for Health Statistics	(202) 442-9010
Florida	Department of Financial Services	(850) 413-1611
Georgia	Department of Labor	(404) 679-0687x113
Hawaii	Department of Labor and Industrial Relations	(808) 586-9001
Idaho	Industrial Commission	(208) 334-6090
Illinois	Department of Public Health	(217) 557-5663
Indiana	Department of Labor	(317) 232-2668
Iowa	Division of Labor Services	(515) 281-5151
Kansas	Department of Labor	(785) 296-1640
Kentucky	Department of Labor	(502) 564-3070x281
Louisiana	Department of Labor	(225) 342-3126
Maine	Bureau of Labor Standards	(207) 624-6454
Maryland	Division of Labor and Industry	(410) 767-2356
Massachusetts	Department of Public Health	(617) 624-5679
Michigan	Department of Labor and Economic Growth	(517) 322-1851
Minnesota	Department of Labor and Industry	(651) 284-5428
Mississippi	Department of Health	(601) 576-7817
Missouri	Department of Labor and Industrial Relations	(573) 751-2454
Montana	Department of Labor and Industry	(406) 444-3297
Nebraska	Workers' Compensation Court	(402) 471-3547
Nevada	Division of Industrial Relations	(775) 684-7081
New Hampshire	Bureau of Vital Records	(603) 271-4647
New Jersey	Department of Health and Senior Services	(609) 292-9553
New Mexico	Occupational Health and Safety Bureau	(505) 827-4230x116, 118
New York State	Department of Health	(518) 402-7900
New York City	Department of Health	(212) 788-4585
North Carolina	Department of Labor	(919) 733-0337
North Dakota	Bureau of Labor Statistics	(312) 353-7200x410
Ohio	Department of Health	(614) 466-4183
Oklahoma	Department of Labor	(405) 528-1500
Oregon	Department of Consumer and Business Services	(503) 947-7367
Pennsylvania	Department of Health	(717) 783-2548x210
Rhode Island	Department of Health	(401) 222-2812
South Carolina	Department of Labor, Licensing and Regulation	(803) 896-7673
South Dakota	Bureau of Labor Statistics	(312) 353-7200x410
Tennessee	Department of Labor and Workforce Development	(615) 741-1749
Texas	Workers' Compensation Commission	(512) 804-4638
Utah	Occupational Safety and Health Statistics	(801) 530-6823
Vermont	Department of Labor and Industry	(802) 828-5076
Virginia	Department of Labor and Industry	(804) 786-1035
Washington	Department of Labor and Industries	(360) 902-5512
West Virginia	Division of Labor	(304) 558-7890x112
Wisconsin	Wisconsin State Laboratory of Hygiene	(608) 221-6289
Wyoming	Department of Employment	(307) 473-3819

Appendix H—Continued

Occupational Safety and Health Statistics Program Regional Office Addresses and Telephone Numbers

Region	Address	Telephone number
Boston	Bureau of Labor Statistics JFK Building, E-310 Boston, MA 02203 (CT, ME, MA, NH, NY, RI, VT)	(617) 565-2302
Philadelphia	Bureau of Labor Statistics The Curtis Center, Suite 610 East 170 S. Independence Mall West Philadelphia, PA 19106-3305 (DE, DC, MD, NJ, PA, VA, WV)	(215) 861-5639
Atlanta	Bureau of Labor Statistics Room 7T50 61 Forsyth Street, SW. Atlanta, GA 30303 (AL, FL, GA, KY, MS, NC, SC, TN)	(404) 562-2518
Chicago	Bureau of Labor Statistics 230 South Dearborn, Room 900 Chicago, IL 60604 (IL, IN, IA, MI, MN, NE, ND, OH, SD, WI)	(312) 353-7200x410
Dallas	Bureau of Labor Statistics 525 Griffin Street, Room 221 Dallas, TX 75202 (AR, CO, KS, LA, MO, MT, NM, OK, TX, UT, WY)	(214) 767-6956
San Francisco	Bureau of Labor Statistics—OSH P.O. Box 193766 San Francisco, CA 94119-3766 (AK, AZ, CA, HI, ID, NV, OR, WA)	(415) 975-4355

Appendix H—Continued

BLS National Office Contact Information

Address
U.S. Department of Labor
Bureau of Labor Statistics
Postal Square Building
Room 3180
Census of Fatal Occupational Injuries Program
2 Massachusetts Avenue, NE.
Washington, DC 20212

Telephone number
(202) 691-6170

Facsimile number
(202) 691-7862

E-mail
IIFSTAFF@bls.gov

Web site
www.bls.gov/iif/

Appendix I. Research Articles and Reports

(Entries appear in chronological order by subject.)

Demographic characteristics

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Windau, Janice and Tracy Jack. "Highway Fatalities Among the Leading Causes of Workplace Deaths." *Compensation and Working Conditions*, September 1996, 57-61.

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