Table 2. **Fatal occupational injuries by occupation and event or exposure, 1993**

Occupation[1]	Number of fatalities	Event or exposure (percent)						Employment (thousands)[2]	Fatalities per 100,000 employed[3]
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments	Fires and explosions		
Total	6,271	40	21	17	10	9	3	120,791	5
Managerial and professional specialty	681	42	32	7	8	9	1	32,280	2
Executive, administrative, and managerial	427	35	37	10	9	7	1	15,376	3
Professional speciality	254	54	22	4	6	11	2	16,904	2
Technical, sales, and administrative support	842	37	53	3	3	3	1	36,814	2
Technicians and related support occupations	167	81	4	4	4	5	2	4,014	4
Airplane pilots and navigators	104	98	—	—	—	—	—	101	103
Sales occupations	556	22	70	2	2	2	1	14,245	4
Administrative support occupations, including clerical	119	40	43	7	5	4	—	18,555	1
Service occupations	539	28	46	5	8	8	5	16,522	3
Protective service occupations	288	34	48	3	4	5	6	2,152	13
Firefighting and fire prevention occupations, including supervisors	39	36	—	—	8	—	46	244	16
Police and detectives, including supervisors	149	42	51	4	—	—	—	1,019	15
Guards, including supervisors	100	21	62	—	6	9	—	889	11
Farming, forestry, and fishing	961	46	5	33	5	10	1	3,326	28
Farming operators and managers	409	52	4	32	3	7	2	1,170	35
Other agricultural and related occupations	319	40	8	27	10	14	1	1,963	16
Farm workers, including supervisors	209	52	7	27	3	10	1	838	24
Forestry and logging occupations	142	20	—	69	5	4	—	132	108
Timber cutting and logging occupations	124	18	—	73	3	4	—	93	133
Fishers, hunters, and trappers	91	75	—	3	—	21	—	61	149
Fishers	79	73	—	4	—	23	—	51	155
Precision production, craft, and repair	1,095	20	9	22	24	20	5	13,326	8
Mechanics and repairers	317	23	15	27	9	19	7	4,416	7
Construction trades	565	18	4	14	37	22	4	5,004	11
Carpenters	96	17	—	15	48	17	—	1,276	7
Electricians	78	13	—	—	23	53	6	666	12
Electrical power installers and repairers	42	12	—	7	19	57	—	110	38
Structural metal workers	34	—	9	21	62	—	—	45	76
Operators, fabricators, and laborers	1,959	50	12	18	8	7	4	17,038	11
Machine operators, assemblers, and inspectors	205	11	9	37	9	14	19	7,415	3
Transportation and material-moving occupations	1,182	67	13	11	5	3	1	5,004	24
Motor vehicle operators	917	71	15	8	3	2	1	3,825	24
Truckdrivers	731	80	4	9	3	2	1	2,786	26
Driver-sales workers	41	76	17	7	—	—	—	178	23
Taxicab drivers and chauffeurs	113	13	86	—	—	—	—	225	50
Material-moving equipment operators	180	44	4	33	11	7	2	1,009	18
Handlers, equipment cleaners, helpers, and laborers	572	30	12	25	15	13	4	4,619	12
Construction laborers	218	29	3	29	22	14	2	658	33
Laborers, except construction	202	32	8	28	12	14	6	1,127	18
Military	121	64	9	11	5	6	5	1,485	8

[1] Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

[2] The employment is an annual average of employed civilians 16 years of age and older, plus resident Armed Forces, from the 1993 Current Population Survey (CPS).

[3] Experimental measure, using CPS employment data. This rate represents the number of fatal occupational injuries per 100,000 employed, and was calculated as follows:

$$N/W \times 100{,}000,$$

where N = number of fatal work injuries and W = employment based on the 1993 CPS.

N was adjusted to maintain consistency with employment coverage (W) in the rate calculation.

NOTE: 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 guidelines. There were 73 fatalities for which there was insufficient information to determine an occupation classification.

SOURCE: Census of Fatal Occupational Injuries, 1993.

portion of homicides among Asians and Pacific Islanders and female workers who were fatally injured. The proportion reflects at least in part the jobs typically held by these workers. Both groups have a high proportion of employment in retail trade. Other workers with an unusually high proportion of fatalities due to homicide include the self-employed; workers 16 and 17 years old; Hispanics; and nonwhites, except American Indians.

The slightly higher than average proportion of fatal contacts with objects and equipment for the self-employed and the younger age groups is explained in part by these groups' employment on farms. Farm workers are often struck by falling trees, caught in farm machinery, and engulfed in collapsing grain in silos or other storage facilities. Loggers who were primarily struck by falling trees added to the toll for the self-employed.

Industry and event or exposure. Agriculture, forestry, and fishing and mining had the highest rates of fatal work injury of all industry divisions. (See table 4.) The rate for agricultural services was particularly high, with 94 workers killed per 100,000 workers employed. Workers in this industrial group perform activities such as crop planting, dusting, and harvesting; veterinary and other livestock services; and landscape and other horticultural services. In addition to incurring transportation-related injuries, landscape and horticultural workers were at risk of suffering fatal injury from falling trees, falls from trees, and contact with electric current. Workers in

Table 3. **Fatal occupational injuries by selected worker characteristics and event or exposure, 1993**

Characteristics	Number of fatalities	Event or exposure (percent)						Employment (thousands)[1]	Fatalities per 100,000 employed[2]
		Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments	Fires and explosions		
Total	6,271	40	21	17	10	9	3	120,791	5
Employment status									
Wage and salary workers	4,981	41	19	16	10	10	4	110,133	5
Self-employed[3]	1,290	34	28	21	8	7	2	10,658	12
Sex and age									
Men	5,790	40	19	17	10	10	3	66,029	9
Women	481	40	42	6	4	6	2	54,761	1
Both sexes:									
Under 16 years	29	34	21	28	—	10	—	—	—
16 to 17 years	39	38	28	21	8	—	—	2,142	2
18 to 19 years	101	42	19	14	6	16	4	3,388	3
20 to 24 years	502	35	21	19	6	15	4	12,613	4
25 to 34 years	1,510	40	22	14	8	12	3	32,703	5
35 to 44 years	1,576	38	22	17	10	9	4	32,691	5
45 to 54 years	1,193	40	21	16	11	9	3	22,450	5
55 to 64 years	801	42	19	18	12	5	2	11,313	7
65 years and older	514	43	17	20	13	4	2	3,409	15
Race or Hispanic origin									
White	5,106	42	18	17	10	10	3	103,917	5
Black	664	33	28	17	8	10	4	12,444	5
Asian or Pacific Islander	190	16	66	4	7	5	—	—	—
American Indian, Aleut, Eskimo	47	40	17	11	9	15	9	—	—
Other or unknown race	263	37	33	13	9	5	2	—	—
Hispanic[4]	604	29	34	15	10	9	3	9,272	6

[1] The employment is an annual average of employed civilians 16 years of age and older, plus resident Armed Forces, from the 1993 Current Population Survey (CPS).

[2] Experimental measure using CPS employment data. This rate represents the number of fatal occupational injuries per 100,000 employed and was calculated as follows:

$$N/W \times 100{,}000,$$

where N = number of fatal work injuries and W = employment based on the 1993 CPS. N was adjusted to maintain consistency with employment coverage (W) in the rate calculation.

[3] Includes paid and unpaid family workers and may include owners of incorporated businesses or members of partnership.

[4] Persons identified as Hispanic may be of any race. Hispanic employment does not include resident Armed Forces.

NOTE: Percentages may not add to totals because of rounding. Dashes indicate no data reported or data that do not meet publication guidelines.

SOURCE: Census of Fatal Occupational Injuries, 1993.

other agriculture-related industries died in highway vehicle incidents, in tractor rollovers, or from running machinery or were engulfed in grain.

Although mining had the second lowest number of fatalities among industry divisions, its fatal work injury rate was tied with that of agriculture, forestry, and fishing. Among fatalities in coal mining, 70 percent were caused by contact with objects such as large rocks or equipment or mine cave-ins.

Table 4. **Fatal occupational injuries by industry and event or exposure, 1993**

Industry	SIC code[1]	Number of fatalities	Event or exposure (percent)						Employment (thousands)[2]	Fatalities per 100,000 employed[3]
			Transportation incidents	Assaults and violent acts	Contact with objects and equipment	Falls	Exposure to harmful substances or environments	Fires and explosions		
Total	....	6,271	40	21	17	10	9	3	120,791	5
Private industry	....	5,590	38	21	18	10	10	3	100,791	6
Agriculture, forestry and fishing	....	855	51	5	26	6	11	1	3,172	26
Agricultural production—crops	01	398	59	3	27	2	7	2	900	43
Agricultural production—livestock	02	209	39	10	35	4	10	—	1,160	17
Agricultural services	07	153	33	8	22	20	17	—	163	94
Mining	....	174	27	3	42	8	14	5	669	26
Coal mining	12	40	12	—	70	—	15	—	114	35
Oil and gas extraction	13	94	33	4	32	10	15	4	371	25
Construction	....	924	25	4	20	30	17	3	6,724	14
General building contractors	15	152	23	5	21	38	10	3	—	—
Heavy construction, except building	16	255	37	3	29	11	16	4	—	—
Special trades contractors	17	517	20	4	16	36	20	4	—	—
Manufacturing	....	762	29	9	36	8	11	6	19,444	4
Food and kindred products	20	82	35	10	24	10	15	6	1,760	5
Lumber and wood products	24	204	28	2	63	3	—	—	704	29
Transportation and public utilities	....	890	65	16	8	3	5	2	6,867	13
Local and interurban passenger transportation	41	130	18	78	—	—	—	—	472	28
Trucking and warehousing	42	467	79	5	9	2	2	1	2,163	22
Transportation by air	45	79	87	—	5	4	—	—	724	11
Electric, gas, and sanitary services	49	72	38	7	19	6	22	8	1,597	5
Wholesale trade	....	250	55	15	13	8	4	4	4,598	5
Retail trade	....	784	18	70	5	2	3	1	20,070	4
Food stores	54	223	7	89	—	2	—	—	3,412	6
Automotive dealers and service stations	55	138	28	54	8	3	4	—	2,041	7
Eating and drinking places	58	199	15	76	3	2	4	—	6,036	3
Finance, insurance, and real estate	....	116	31	40	3	15	11	—	7,728	2
Services		758	35	28	10	9	13	4	31,516	2
Business services	73	188	32	26	9	15	12	4	4,643	4
Automotive repair, services, and parking	75	116	22	32	22	3	11	9	1,470	8
Government[4]	....	681	52	23	7	7	6	5	20,001	3
Federal (including resident Armed Forces)	....	186	61	16	7	7	4	4	4,941	4
State	....	146	64	18	5	5	5	2	4,905	3
Local	....	340	42	30	7	7	7	7	10,155	3
Police protection	9221	87	44	49	3	—	—	—	—	—

[1] *Standard Industrial Classification Manual,* 1987 edition.

[2] The employment is an annual average of employed civilians 16 years of age and older, plus resident Armed Forces, from the 1993 Current Population Survey (CPS).

[3] Experimental measure using CPS employment data. This rate represents the number of fatal occupational injuries per 100,000 employed and was calculated as follows:

$$N/W \times 100{,}000,$$

where N = number of fatal work injuries and W = employment based on the 1993 CPS.

N was adjusted to maintain consistency with employment coverage (W) in the rate calculation.

[4] Includes fatalities to workers employed by government 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 no data reported or data that do not meet publication guidelines. There were 77 fatalities for which there was insufficient information to determine a specific industry classification, although a distinction between private and government was made for each.

SOURCE: Census of Fatal Occupational Injuries, 1993.