

# News

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## **NATIONAL CENSUS OF FATAL OCCUPATIONAL INJURIES, 1998**

The number of fatal work injuries fell to 6,026 during 1998, about 3 percent below the previous year and the lowest count since the Census of Fatal Occupational Injuries, conducted by the Bureau of Labor Statistics, U.S. Department of Labor, began in 1992. An 18 percent drop in job-related homicides accounted for a large portion of the decline. (See table 1.) Deaths from workers being struck by falling objects or caught in running machinery also fell from their 1997 totals.

In contrast, worker deaths from highway crashes, from being struck by vehicles, and from contacts with overhead powerlines were at their highest levels during the 7-year period. The construction industry reported the largest number of fatal work injuries of any industry and accounted for nearly one-fifth of the fatality total in 1998.

### Profiles of 1998 fatal work injuries

Highway crashes continued as the leading cause of on-the-job fatalities during 1998, accounting for 24 percent of the fatal work injury total. (See table 1 and chart 1.) The number of these fatalities increased slightly over their 1997 total to reach the highest level since the BLS fatality census began in 1992. This rise resulted mainly from an increase in the number of workers killed in highway crashes between oncoming vehicles. Slightly over two-fifths of the 1,431 victims of job-related highway fatalities were employed as truck drivers.

The number of workers fatally struck by vehicles rose to 413, an increase of 13 percent from their 1997 total and the highest number in the 7-year period that the fatality census has been compiled. The accompanying table presents these fatalities for selected industries in 1998. In contrast to job-related fatalities, total highway and pedestrian fatalities dropped in 1998 from 1997, according to preliminary figures from the U.S. Department of Transportation.

Industry	Number	Percent
Total job-related fatalities, "struck by vehicles" ...	413	100
<i>Private sector</i> .....	348	84
Construction .....	103	25
Highway and street construction.....	45	11
Transportation and public utilities.....	81	20
Trucking and warehousing .....	56	14
Services .....	51	12
Agriculture, forestry, and fishing.....	48	12
Manufacturing .....	31	8
Retail trade .....	23	6
<i>Public sector</i> .....	65	16
Highway and street construction.....	17	4
Police protection .....	13	3

The second leading cause of on-the-job deaths, workplace homicides, fell to its lowest level in the past 7 years. A total of 709 workers died as a result of job-related homicide in 1998 compared with 1,080 in 1994, which had the highest count in the 7-year period. The drop in homicide at work was most pronounced in retail trade, where homicides fell by 46 percent from 1994. The following table shows counts of workplace homicides for selected industries during 1994-98.

Industry	1994	1995	1996	1997	1998
<i>Total homicides</i> .....	1,080	1,036	927	860	709
Retail trade.....	530	422	437	395	286
Grocery stores .....	196	152	146	141	95
Eating and drinking places.....	135	121	135	109	69
Gasoline service stations.....	41	36	23	34	24
Taxicab .....	87	68	50	74	48
Detective and armored car services .....	49	27	29	21	18
Police protection.....	65	61	45	61	50

Robbery continued to be the primary motive of job-related homicides in retail trade when a motive could be ascertained from the source documents. The 18 percent drop in workplace homicides from 1997 was more pronounced than the 8 percent decline in total homicides that was reported by the U.S. Department of Justice.

In 1998, deaths resulting from on-the-job falls totaled 702, nearly the same as the worker homicide total. Modest increases in falls from roofs and scaffolds resulted in 7-year highs for these two totals. Most of the worker deaths resulting from falls from roofs and scaffolds occurred in the construction industry, which accounts for about half the fatal workplace falls each year.

Electrocutions accounted for 6 percent of the fatal injuries and increased by 12 percent from 1997. Contact with overhead power lines accounted for about half the deaths from electrocution.

In fatal event categories that increased from 1997 to 1998, much of the increases occurred in the construction industry. The following table lists the major fatal events in the construction industry during 1997 and 1998.

Event	1997	1998	
	Number	Number	Percent
<i>Total construction fatalities (private sector).....</i>	1,107	1,171	100
Falls .....	377	383	33
From roofs .....	129	123	11
From scaffolds .....	63	84	7
From ladders.....	63	54	5
From building girders or other structural steel.....	38	39	3
Electrocutions .....	140	171	15
Highway crashes .....	125	147	13
Worker struck by vehicle.....	86	103	9
Struck by falling objects.....	65	67	6
Trench cave-ins.....	26	36	3
Collapsing structures.....	28	28	2

On average, about 17 workers were fatally injured each day during 1998. Eighty-four percent of fatally injured workers died the day they were injured; 97 percent died within 30 days. There were 227 multiple-fatality incidents (incidents that resulted in two or more worker deaths), resulting in 555 job-related deaths. This was a slight increase over the number of multiple-fatality events reported for 1997, when 220 incidents resulted in 544 deaths. Unlike some previous years, there was no single event such as an airline crash or explosion with more than a dozen fatalities in 1998.

**Occupation highlights (table 2 and chart 2):**

\* Occupations with large numbers of fatal injuries included truck drivers, construction trades, farm occupations, and sales occupations.

\* Fatal injuries to truck drivers were at their highest level in the 7-year period. In contrast, the number of fatalities in sales occupations fell to its lowest level during the same period, primarily because of the drop in homicides. (For more information on fatalities for selected occupations, see BLS Report 934, *Fatal Workplace Injuries in 1997: A Collection of Data and Analysis.*)

**Relative risk (tables 3 and 4):**

A comparison of percent distributions of fatalities and employment can be used to evaluate the relative risk of a job-related fatality for a given industry or worker characteristic. For example, the construction industry accounted for 19 percent of the fatality total, 3 times its 6-percent share of total employment. While employment can be used to evaluate the relative risk of a fatal work injury, other measures, such as employee exposure hours, also can be used.

**Industry highlights (table 3):**

\* Industry divisions with large numbers of fatalities relative to their employment include agriculture, forestry, and fishing; construction; transportation and public utilities; and mining.

\* The number of fatal work injuries in retail trade dropped 15 percent from 1997 totals, primarily due to a decline in workplace homicides.

#### **Demographic highlights (table 4):**

- \* Men, the self-employed, and older workers suffered fatal injuries more often than their employment shares would suggest. Differences in the industries and occupations of these worker groups explain in part their high relative risk of fatal injury on the job.
- \* Highway-related incidents were the leading cause of job-related fatalities among men; homicides were the leading cause of fatal injuries among women workers.
- \* The majority of fatally injured workers under 17 years of age were killed while doing farm work; two-fifths of worker fatalities among 17-year olds occurred in the construction industry.

#### **State highlights (table 5):**

- \* In general, the states with the largest number of persons employed have the largest number of work-related fatalities. Three of the largest states--California, Texas, and Florida--accounted for one-fourth of the total fatalities. Each state's industry mix, geographical features, age of population, and other characteristics of the workforce must be considered when evaluating state fatality profiles.
- \* Job-related homicides in the New York City and Los Angeles metropolitan areas dropped by 69 and 54 percent, respectively, from their 7-year highs reported in 1993. These declines accounted for half of the national decline in job-related homicides from 1993 to 1998.

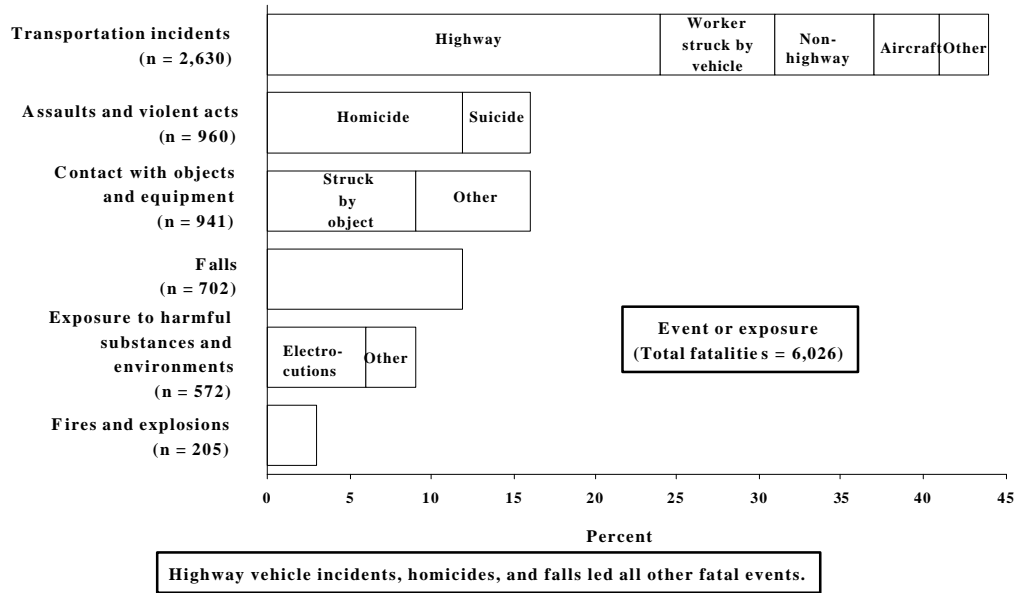
#### Background of the program

The Census of Fatal Occupational Injuries, part of the BLS safety and health statistics program, provides the most complete count of fatal work injuries available because it uses diverse state and federal data sources to identify, verify, and profile fatal work injuries. Information about each workplace fatality (occupation and other worker characteristics, equipment being used, and circumstances of the event) is obtained by cross-referencing source documents, such as death certificates, workers' compensation records, and reports to federal and state agencies. This method assures counts are as complete and accurate as possible.

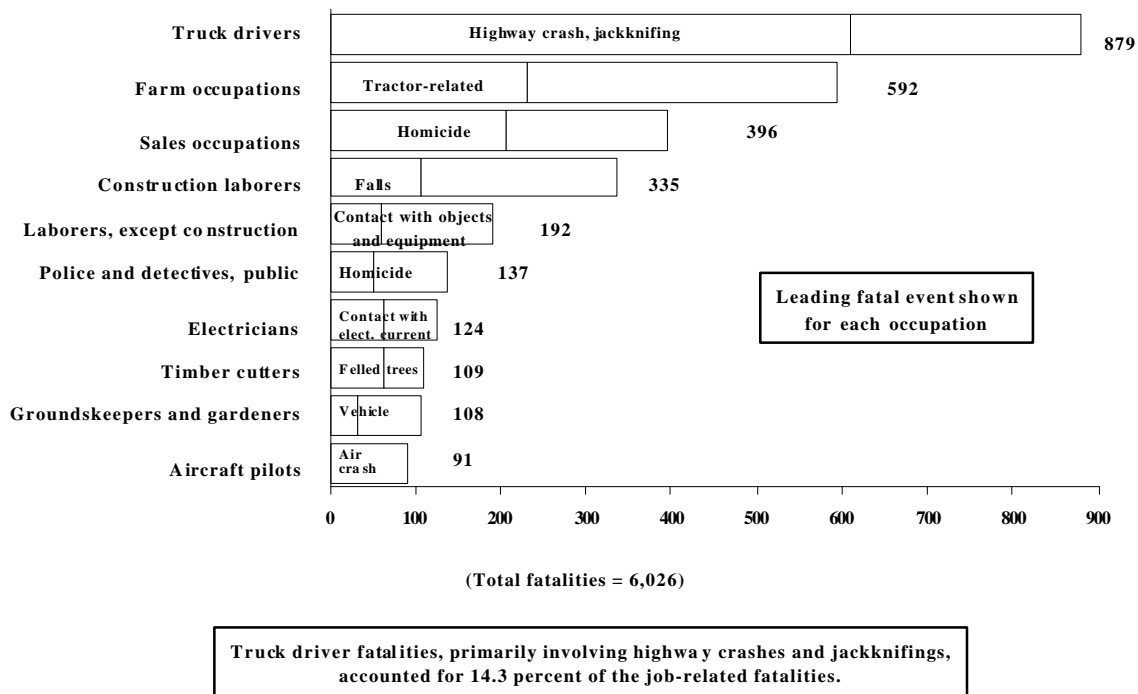
This is the seventh year that the fatality census has been conducted in all 50 states and the District of Columbia. The BLS fatality census is a federal/state cooperative venture in which costs are shared equally. Additional state-specific data are available from the participating state agencies listed in table 6.

Another BLS program, the Survey of Occupational Injuries and Illnesses, profiles worker and case characteristics of nonfatal workplace injuries and illnesses that result in lost worktime and presents frequency counts and incidence rates by industry. Copies of the 1997 news release on nonfatal injuries and illnesses are available from BLS by calling (202) 606-6179. Incidence rates for 1998 by industry will be published in December 1999, and information on 1998 worker and case characteristics will be available in April 2000. For additional data, access the BLS World Wide Web Internet site: <https://www.bls.gov/oshhome.htm>. To request a copy of BLS Report 934, which includes several articles and highlights 1997 fatality data, e-mail your address to [CFOIstaff@bls.gov](mailto:CFOIstaff@bls.gov) or write to Bureau of Labor Statistics, 2 Massachusetts Avenue, NE, Room 3180, Washington, DC 20212.

**Chart 1: The manner in which workplace fatalities occurred, 1998**



**Chart 2: Occupations with large numbers of worker fatalities and the leading event, 1998**



**Table 1. Fatal occupational injuries by event or exposure, 1993-98**

Event or exposure <sup>1</sup>	Fatalities			
	1993-97 average	1997 <sup>2</sup>	1998	
		Number	Number	Percent
Total .....	6,335	6,238	6,026	100
<b>Transportation incidents</b> .....	2,611	2,605	2,630	44
Highway .....	1,334	1,393	1,431	24
Collision between vehicles, mobile equipment.....	652	640	701	12
Moving in same direction .....	109	103	118	2
Moving in opposite directions, oncoming .....	234	230	271	4
Moving in intersection .....	132	142	142	2
Vehicle struck stationary object or equipment.....	249	282	306	5
Noncollision .....	360	387	373	6
Jackknifed or overturned--no collision .....	267	298	300	5
Nonhighway (farm, industrial premises) .....	388	377	384	6
Overturned.....	214	216	216	4
Aircraft.....	315	261	223	4
Worker struck by a vehicle .....	373	367	413	7
Water vehicle.....	106	109	112	2
Railway.....	83	93	60	1
<b>Assaults and violent acts</b> .....	1,241	1,111	960	16
Homicides .....	995	860	709	12
Shooting.....	810	708	569	9
Stabbing.....	75	73	61	1
Other, including bombing .....	110	79	79	1
Self-inflicted injuries.....	215	216	223	4
<b>Contact with objects and equipment</b> .....	1,005	1,035	941	16
Struck by object .....	573	579	517	9
Struck by falling object .....	369	384	317	5
Struck by flying object .....	65	54	58	1
Caught in or compressed by equipment or objects....	290	320	266	4
Caught in running equipment or machinery .....	153	189	129	2
Caught in or crushed in collapsing materials.....	124	118	140	2
<b>Falls</b> .....	668	716	702	12
Fall to lower level .....	591	653	623	10
Fall from ladder.....	94	116	111	2
Fall from roof.....	139	154	156	3
Fall from scaffold .....	83	87	97	2
Fall on same level.....	52	44	51	1
<b>Exposure to harmful substances or environments</b> ...	586	554	572	9
Contact with electric current.....	320	298	334	6
Contact with overhead powerlines.....	128	138	153	3
Contact with temperature extremes.....	43	40	46	1
Exposure to caustic, noxious, or allergenic substances.....	120	123	104	2
Inhalation of substance .....	70	59	48	1
Oxygen deficiency .....	101	90	87	1
Drowning, submersion.....	80	72	75	1
<b>Fires and explosions</b> .....	199	196	205	3
<b>Other events or exposures</b> <sup>3</sup> .....	26	21	16	-

<sup>1</sup> Based on the 1992 BLS Occupational Injury and Illness Classification Structure.

<sup>2</sup> The BLS news release issued Aug. 12, 1998, reported a total of 6,218 fatal work injuries for calendar year 1997. Since then, an additional 20 job-related fatalities were identified, bringing the total job-related fatality count for 1997 to 6,238.

<sup>3</sup> Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate less than 0.5 percent or data that are not available or that do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1993-98.

**Table 2. Fatal occupational injuries by occupation and major event or exposure, 1998**

Occupation <sup>1</sup>	Fatalities		Major event or exposure <sup>2</sup> (percent)			
	Number	Percent	Highway <sup>3</sup>	Homicide	Struck by object	Fall to lower level
Total .....	6,026	100	24	12	9	10
<b>Managerial and professional specialty</b> .....	637	11	27	21	3	7
Executive, administrative, and managerial.....	408	7	25	25	4	9
Professional specialty.....	229	4	31	13	2	4
<b>Technical, sales, and administrative support</b> .....	678	11	24	35	2	3
Technicians and related support occupations.....	168	3	20	3	-	-
Airplane pilots and navigators.....	91	2	-	-	-	-
Sales occupations.....	396	7	23	52	2	3
Supervisors and proprietors, sales occupations.....	185	3	11	63	2	5
Sales workers, retail and personal services.....	152	3	24	53	-	3
Cashiers.....	52	1	-	87	-	-
Administrative support occupations, including clerical..	114	2	34	25	3	7
<b>Service occupations</b> .....	439	7	22	33	1	4
Protective service occupations.....	257	4	25	35	1	-
Firefighting and fire prevention occupations, including supervisors.....	45	1	18	-	-	-
Police and detectives, including supervisors.....	137	2	34	38	-	-
Guards, including supervisors.....	75	1	12	52	-	-
<b>Farming, forestry, and fishing</b> .....	921	15	11	2	18	6
Farming operators and managers.....	370	6	11	2	15	4
Farmers, except horticultural.....	277	5	9	1	16	3
Managers, farms, except horticultural.....	81	1	17	-	9	4
Other agricultural and related occupations.....	361	6	16	3	11	9
Farm workers, including supervisors.....	234	4	15	5	9	5
Forestry and logging occupations.....	118	2	3	-	60	5
Fishers, hunters, and trappers.....	72	1	-	-	-	-
Fishers, including vessel captains and officers.....	71	1	-	-	-	-
<b>Precision production, craft, and repair</b> .....	1,084	18	10	4	11	27
Mechanics and repairers.....	285	5	13	6	18	11
Construction trades.....	631	10	9	1	7	38
Carpenters and apprentices.....	90	1	4	-	12	59
Electricians and apprentices.....	124	2	7	-	8	15
Painters.....	41	1	15	-	-	46
Roofers.....	50	1	6	-	-	76
Structural metal workers.....	52	1	-	-	10	81
<b>Operators, fabricators, and laborers</b> .....	2,151	36	36	6	9	9
Machine operators, assemblers, and inspectors.....	221	4	5	6	16	10
Transportation and material moving occupations.....	1,257	21	55	7	7	2
Motor vehicle operators.....	1,020	17	66	8	5	2
Truck drivers.....	879	15	69	3	6	2
Driver-sales workers.....	36	1	64	14	-	-
Taxicab drivers and chauffeurs.....	82	1	38	60	-	-
Material moving equipment operators.....	197	3	9	2	16	5
Handlers, equipment cleaners, helpers, and laborers..	673	11	10	5	10	21
Construction laborers.....	335	6	11	-	6	31
Laborers, except construction.....	192	3	9	4	16	12
<b>Military</b> <sup>4</sup> .....	88	1	12	-	9	-

<sup>1</sup> Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

<sup>2</sup> The figure shown is the percent of the total fatalities for that occupational group.

<sup>3</sup> "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 nonpassengers.

<sup>4</sup> Resident armed forces.

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. There were 28 fatalities for which there was insufficient information to determine an occupation classification. Dashes indicate less than 0.5 percent or data that are not available or that do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1998.

Table 3. Fatal occupational injuries and employment by industry, 1998

Industry	SIC code <sup>1</sup>	Fatalities				Employment <sup>2</sup> (in thousands)	
		1993-97 average	1997 (revised)	1998		Number	Percent
		Number	Number	Number	Percent		
Total .....		6,335	6,238	6,026	100	132,684	100
<b>Private industry</b> .....		5,662	5,616	5,428	90	113,066	85
<b>Agriculture, forestry, and fishing</b> .....		831	833	831	14	3,450	3
Agricultural production – crops .....	01	383	373	378	6	1,012	1
Agricultural production – livestock .....	02	178	183	174	3	1,092	1
Agricultural services .....	07	165	178	167	3	1,259	1
<b>Mining</b> .....		164	158	146	2	618	-
Coal mining .....	12	39	32	30	-	82	-
Oil and gas extraction .....	13	88	85	76	1	373	-
<b>Construction</b> .....		1,034	1,107	1,171	19	8,044	6
General building contractors .....	15	180	194	212	4	-	-
Heavy construction, except building .....	16	249	252	271	4	-	-
Special trades contractors .....	17	597	648	679	11	-	-
<b>Manufacturing</b> .....		747	744	694	12	20,665	16
Food and kindred products .....	20	78	78	72	1	1,654	1
Lumber and wood products .....	24	198	199	170	3	861	1
<b>Transportation and public utilities</b> .....		944	1,008	909	15	7,713	6
Local and interurban passenger transportation .....	41	109	106	85	1	552	-
Trucking and warehousing .....	42	509	573	562	9	2,578	2
Transportation by air .....	45	91	83	74	1	832	1
Electric, gas, and sanitary services .....	49	86	89	83	1	1,060	1
<b>Wholesale trade</b> .....		258	241	228	4	5,077	4
<b>Retail trade</b> .....		728	670	569	9	22,010	17
Food stores .....	54	205	192	135	2	3,602	3
Automotive dealers and service stations .....	55	120	115	119	2	2,221	2
Eating and drinking places .....	58	174	151	107	2	6,723	5
<b>Finance, insurance, and real estate</b> .....		114	97	92	2	8,399	6
<b>Services</b> .....		776	727	757	13	37,090	28
Business services .....	73	202	183	194	3	6,403	5
Automotive repair, services, and parking .....	75	108	110	132	2	1,532	1
<b>Government</b> <sup>3</sup> .....		674	622	598	10	19,618	15
Federal (including resident armed forces) .....		209	162	164	3	4,468	3
State .....		129	125	135	2	5,160	4
Local .....		329	331	295	5	9,990	8
Police protection .....	9221	101	114	101	2	-	-

<sup>1</sup> Standard Industrial Classification Manual, 1987 Edition.

<sup>2</sup> Employment is an annual average of employed civilians 16 years of age and older, plus resident armed forces, from the Current Population Survey, 1998.

<sup>3</sup> 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. There were 31 fatalities for which there was insufficient information to determine a specific industry classification, though a distinction between private sector and government was made for each. Dashes indicate less than 0.5 percent or data that are not available or that do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1993-98.



**Table 4. Fatal occupational injuries and employment by selected worker characteristics, 1998**

Characteristics	Fatalities		Employment (in thousands) <sup>1</sup>		Most frequent events <sup>2</sup> (percent of total)
	Number	Percent	Number	Percent	
Total .....	6,026	100	132,684	100	Highway (24 percent), homicide (12 percent)
<b>Employee status</b>					
Wage and salary workers .....	4,782	79	122,240	92	Highway (26), homicide (11)
Self-employed <sup>3</sup> .....	1,244	21	10,444	8	Nonhighway (16), highway (15)
<b>Sex</b>					
Men .....	5,544	92	71,744	54	Highway (23), fall to lower level (11)
Women .....	482	8	60,940	46	Homicide (34), highway (29)
<b>Age<sup>4</sup></b>					
Under 16 years .....	33	1	-	-	Nonhighway (42), homicide (12)
16 to 17 years .....	32	1	2,764	2	Highway (28), fall to lower level (16)
18 to 19 years .....	136	2	4,383	3	Highway (29), electrocution (10)
20 to 24 years .....	418	7	12,923	10	Highway (25), fall to lower level (11)
25 to 34 years .....	1,233	20	31,850	24	Highway (23), homicide (14)
35 to 44 years .....	1,521	25	36,543	28	Highway (23), homicide (13)
45 to 54 years .....	1,271	21	27,623	21	Highway (26), fall to lower level (11)
55 to 64 years .....	835	14	12,873	10	Highway (26), fall to lower level (12)
65 years and over .....	534	9	3,725	3	Highway (23), nonhighway (19)
<b>Race</b>					
White .....	5,016	83	111,863	84	Highway (24), fall to lower level (10)
Black .....	591	10	14,795	11	Highway (22), homicide (22)
Asian or Pacific Islander .....	148	2	-	-	Homicide (46), fall to lower level (13)
American Indian, Aleut, Eskimo .....	28	-	-	-	Highway (18)
Other or not reported .....	243	4	-	-	Highway (22), fall to lower level (17)
<b>Hispanic origin</b>					
Hispanic <sup>5</sup> .....	700	12	13,381	10	Highway (19), fall to lower level (16)

<sup>1</sup> Employment is an annual average of employed civilians 16 years of age and older, plus resident armed forces, from the Current Population Survey, 1998.

<sup>2</sup> "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. "Nonhighway" includes transport-related deaths of vehicle occupants that occur or originate entirely off the roadway. Incidents involving trains and deaths to pedestrians or other nonpassengers are excluded from both categories.

<sup>3</sup> Includes paid and unpaid family workers and may include owners of incorporated businesses or members of partnerships.

<sup>4</sup> There were 13 fatalities for which age was not reported.

<sup>5</sup> Persons identified as Hispanic may be of any race. Hispanic employment does not include resident armed forces.

NOTE: Totals may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dashes indicate less than 0.5 percent or data that are not available or that do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1998.

**Table 5. Fatal occupational injuries by State and event or exposure, 1998**

State of injury	Total fatalities <sup>1</sup>		Event or exposure <sup>2</sup> (percent of State total for 1998)					
	1997 (revised)	1998	Transportation incidents <sup>3</sup>	Assaults and violent acts <sup>4</sup>	Contact with objects and equipment	Falls	Exposure to harmful substances or environments	Fires and explosions
Total <sup>5</sup> .....	6,238	6,026	44	16	16	12	9	3
Alabama .....	139	135	49	13	16	5	13	3
Alaska .....	51	43	70	16	-	9	-	-
Arizona .....	61	71	41	13	18	10	13	6
Arkansas .....	102	86	48	10	17	12	8	5
California .....	651	617	40	24	11	13	9	1
Colorado .....	120	77	49	12	19	13	5	-
Connecticut .....	32	55	35	29	5	16	13	-
Delaware .....	17	11	45	-	-	-	-	-
District of Columbia .....	23	13	-	46	23	-	-	-
Florida .....	366	384	42	22	9	15	11	2
Georgia .....	242	195	41	17	16	15	8	3
Hawaii .....	19	12	58	-	-	25	-	-
Idaho .....	56	51	53	6	20	8	10	-
Illinois .....	240	216	37	18	17	16	11	2
Indiana .....	190	154	53	18	12	9	7	-
Iowa .....	80	68	50	-	21	13	9	4
Kansas .....	93	98	53	8	12	3	12	11
Kentucky .....	143	117	38	14	27	12	9	-
Louisiana .....	137	159	45	13	13	7	12	11
Maine .....	19	26	50	-	23	15	-	-
Maryland .....	82	78	50	21	6	9	10	4
Massachusetts .....	69	44	34	9	20	20	11	-
Michigan .....	174	179	30	18	20	12	12	8
Minnesota .....	72	84	40	4	32	11	10	4
Mississippi .....	104	113	50	14	13	9	9	4
Missouri .....	123	145	43	12	17	14	10	3
Montana .....	56	58	50	22	7	14	5	-
Nebraska .....	46	56	59	9	20	-	9	-
Nevada .....	55	60	50	25	7	12	-	7
New Hampshire .....	23	23	43	22	17	13	-	-
New Jersey .....	101	103	43	14	19	14	8	3
New Mexico .....	50	48	40	15	15	6	12	10
New York (including N.Y.C.) .....	264	243	32	22	15	17	8	6
New York City .....	109	94	11	41	12	20	6	10
North Carolina .....	210	228	49	16	17	11	7	-
North Dakota .....	35	24	42	-	46	-	-	-
Ohio .....	201	186	46	11	18	13	5	6
Oklahoma .....	104	75	49	9	17	9	11	-
Oregon .....	84	72	54	8	24	7	7	-
Pennsylvania .....	259	235	43	15	18	9	10	6
Rhode Island .....	11	12	50	-	-	-	-	-
South Carolina .....	131	110	42	22	14	11	10	-
South Dakota .....	23	28	54	-	32	-	-	-
Tennessee .....	168	150	49	12	17	7	15	-
Texas .....	459	523	41	15	15	11	14	4
Utah .....	66	67	57	-	12	15	9	4
Vermont .....	9	16	38	-	25	-	-	19
Virginia .....	166	176	43	23	15	13	6	-
Washington .....	112	112	44	9	14	12	13	7
West Virginia .....	53	57	33	7	39	12	-	5
Wisconsin .....	114	97	51	18	20	6	5	-
Wyoming .....	29	33	73	-	9	-	9	-

<sup>1</sup> Includes other events and exposures, such as bodily reaction, in addition to those shown separately.

<sup>2</sup> Based on the 1992 BLS Occupational Injury and Illness Classification Structure.

<sup>3</sup> Includes highway, nonhighway, air, water, and rail fatalities and fatalities to workers struck by vehicles.

<sup>4</sup> Includes violence by persons, self-inflicted injuries, and assaults by animals.

<sup>5</sup> Includes fatalities that occurred outside the territorial boundaries of the 50 States.

NOTE: Percentages may not add to 100 because of rounding. Dashes indicate less than 0.5 percent or data that are not available or that do not meet publication criteria.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, in cooperation with State and Federal Agencies, Census of Fatal Occupational Injuries, 1997-98.

**Table 6. CFI participating State agencies 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	(602) 542-3739
Arkansas	Department of Labor	(501) 682-4542
California	Department of Industrial Relations	(415) 703-4757
Colorado	Department of Public Health	(303) 692-2168
Connecticut	Labor Department	(860) 566-4380
Delaware	Department of Labor	(302) 761-8223
District of Columbia	Center for Health Statistics	(202) 442-5922
Florida	Department of Labor and Employment Security	(850) 922-8953
Georgia	Department of Labor	(404) 656-2966
Hawaii	Department of Labor and Industrial Relations	(808) 586-9008
Idaho	Industrial Commission	(208) 334-6090
Illinois	Department of Public Health	(217) 785-1873
Indiana	Department of Labor	(317) 232-2665
Iowa	Department of Labor Services	(515) 281-5151
Kansas	Department of Health and Environment	(785) 296-1058
Kentucky	Labor Cabinet	(502) 564-3070
Louisiana	Department of Labor	(504) 342-3126
Maine	Bureau of Labor Standards	(207) 624-6440
Maryland	Division of Labor and Industry	(410) 767-2356
Massachusetts	Department of Public Health	(617) 624-5628
Michigan	Department of Consumer and Industry Services	(517) 322-5258
Minnesota	Department of Labor and Industry	(651) 296-3885
Mississippi	Department of Health	(601) 576-7741
Missouri	Bureau of Health Services Statistics	(573) 751-6103
Montana	Department of Labor and Industry	(406) 444-3297
Nebraska	Workers' Compensation Court	(402) 471-3547
Nevada	Division of Industrial Relations	(775) 687-3298
New Hampshire	Department of Public Health	(603) 271-4647
New Jersey	Department of Health	(609) 984-7160
New Mexico	Occupational Health and Safety Bureau	(505) 827-4230
New York	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	(816) 426-2483
Ohio	Department of Health	(614) 466-4183
Oklahoma	Department of Labor	(405) 528-1500
Oregon	Department of Consumer and Business Services	(503) 947-8254
Pennsylvania	Department of Health	(717) 783-2548
Rhode Island	Department of Health	(401) 277-2812
South Carolina	Department of Labor	(803) 734-4298
South Dakota	Bureau of Labor Statistics	(816) 426-2483
Tennessee	Department of Labor and Workforce Development	(615) 741-1749
Texas	Workers' Compensation Commission	(512) 440-3852
Utah	Labor Commission	(801) 530-6823
Vermont	Department of Labor and Industry	(802) 828-2195
Virginia	Department of Labor and Industry	(804) 786-6427
Washington	Department of Labor and Industries	(360) 902-5510
West Virginia	Department of Labor	(304) 558-7890
Wisconsin	Department of Workforce Development	(608) 266-7850
Wyoming	Bureau of Labor Statistics	(816) 426-2483

## TECHNICAL NOTES

### Definitions

For a fatality to be included in the census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job. These criteria are generally broader than those used by federal and state agencies administering specific laws and regulations. (Fatalities that occur during a person's commute to or from work are excluded from the census counts.)

Data presented in this release include deaths occurring in 1998 that resulted from traumatic occupational injuries. An injury is defined as any intentional or unintentional wound or damage to the body resulting from acute exposure to energy, such as heat, electricity, or kinetic energy from a crash or from the absence of such essentials as heat or oxygen caused by a specific event, incident, or series of events within a single workday or shift. Included are open wounds, intracranial and internal injuries, heatstroke, hypothermia, asphyxiations, acute poisonings resulting from short-term exposures limited to the worker's shift, suicides and homicides, and work injuries listed as underlying or contributory causes of death.

Information on work-related fatal illnesses are not reported in the BLS census and are excluded from the attached tables because the latency period of many occupational illnesses and the difficulty of linking illnesses to work make identification of a universe problematic. Partial information on fatal occupational illnesses, compiled separately, is available in BLS Report 934.

### Measurement techniques and limitations

Data for the Census of Fatal Occupational Injuries are compiled from various federal, state, and local administrative sources--including death certificates, workers' compensation reports and claims, reports to various regulatory agencies, medical examiner reports, and police reports--as well as news reports. Diverse sources are used because studies have shown that no single source captures all job-related fatalities. Source documents are matched so that each fatality is counted only once. To ensure that a fatality occurred while the decedent was at work, information is verified from two or more independent source documents or from a source document and a follow-up questionnaire. Approximately 30 data elements are collected, coded, and tabulated, including information about the worker, the fatal incident, and the machinery or equipment involved.

#### *Identification and verification of work-related fatalities.*

Because some state laws and regulations prohibit enumerators from contacting the next-of-kin, it was not possible to independently verify work relationship (whether a fatality is job related) for 177 fatal work injuries in 1998; however, the information on the initiating source document for these cases was sufficient to determine that the incident was likely to be job-

related. Data for these fatalities, which primarily affected self-employed workers, are included in the Census of Fatal Occupational Injuries counts. An additional 18 fatalities submitted by states were not included because the initiating source document had insufficient information to determine work relationship, which could not be verified by either an independent source document or a follow-up questionnaire.

States may identify additional fatal work injuries after data collection closeout for a reference year. In addition, other fatalities excluded from the published count because of insufficient information to determine work relationship may subsequently be verified as work related. States have up to one year to update their initial published state counts. This procedure ensures that fatality data are disseminated as quickly as possible and that no legitimate case is excluded from the counts. Thus, each year's report should be considered preliminary until the next year's data are issued. Increases in the published counts based on additional information have averaged less than 100 fatalities per year or less than 1.5 percent of the total.

#### *Federal/state agency coverage*

The Census of Fatal Occupational Injuries includes data for all fatal work injuries, whether they are covered by the Occupational Safety and Health Administration (OSHA) or other federal or state agencies or are outside the scope of regulatory coverage. Thus, any comparison between the BLS fatality census counts and those released by other agencies should take into account the different coverage requirements and definitions being used.

Several federal and state agencies have jurisdiction over workplace safety and health. OSHA and affiliated agencies in states with approved safety programs cover the largest portion of America's workers. However, injuries and illnesses occurring in certain industries or activities such as coal, metal, and nonmetal mining and highway, water, rail, and air transportation, are excluded from OSHA coverage because they are covered by other federal agencies, such as the Mine Safety and Health Administration and various agencies within the Department of Transportation. Fatalities occurring in activities regulated by federal agencies other than OSHA accounted for about 18 percent of the fatal work injuries in 1998.

Fatalities occurring among several other groups of workers are generally not covered by any federal or state agencies. These groups include self-employed and unpaid family workers, which accounted for about 21 percent of the fatalities; laborers on small farms, accounting for about 2 percent of the fatalities; and state and local government employees in states without OSHA-approved safety programs, which accounted for about 4 percent. (Approximately one-half of the states have approved OSHA safety programs, which cover state and local government employees.)

**ACKNOWLEDGMENTS:** BLS thanks the participating states for their efforts in collecting accurate, comprehensive, and useful data on fatal work injuries. BLS also appreciates the efforts of all federal, state, local, and private sector agencies that submitted source documents used to identify fatal work injuries. Among these agencies are the Occupational Safety and Health Administration; the National Transportation Safety Board; the U.S. Coast Guard; the Mine Safety and Health Administration; the Employment Standards Administration (Federal Employees' Compensation and Longshore and Harbor Workers' divisions); the Department of Energy; the National Association of Chiefs of Police; United Steelworkers of America; state vital statistics registrars, coroners, and medical examiners; state departments of health, labor, and industries and workers' compensation agencies; state and local police departments; and state farm bureaus.