

Fatalities in the Ornamental Shrub and Tree Services Industry

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While changes in industry classifications provide more detail on new and growing industries, less detail will be available for some smaller industries. Data on fatal injuries in the ornamental shrub and tree services industry for 2002 are the last such data available.

As the U.S. economy continues to evolve, industry classifications evolve as well. In the past few decades, there have been declines in such industries as manufacturers of typewriters and vinyl records, while new industries have arisen, including Internet publishing, laser eye surgery, and cellular phone services.¹ To keep up with these changes, the classification system used to categorize industries was revised in the mid-1990s; the former system, the Standard Industrial Classification (SIC) system, was replaced with the North American Industry Classification System (NAICS), which not only identifies and categorizes emerging industries but was designed to provide consistent classification between the U.S., Mexico, and Canada. And while NAICS has modernized the classification of industries, some smaller industries have been subsumed into broader categories that might not distinguish their unique character. The data presented here are from one such industry--ornamental shrub and tree services. This unique industry, classified separately under the SIC system (SIC 0783), is now part of the larger industry known as landscaping services under NAICS (NAICS 561730).²

The ornamental shrub and tree services industry was defined under the SIC system to include such activities as arborist services; ornamental tree and bush planting, pruning, bracing, spraying, removal, and surgery; and utility line tree trimming services. Under the new NAICS classification, organizations in the landscaping services industry comprise those providing landscape care and maintenance services and/or installing trees, shrubs, plants, lawns, or gardens; and those providing these services along with the design of landscape plans and/or the construction/installation of walkways, retaining walls, decks, fences, ponds, and similar structures. The addition of those involved in lawn and garden work and those involved in design and installation work, both previously in separate categories, results in the NAICS landscape services industry employing just over 1 million workers in 2003.³

There were 70 fatal occupational injuries in the ornamental shrub and tree services industry in 2002, the last year that such data are available. In the 11 years (1992-2002) for which data are available from the BLS [Census of Fatal Occupational Injuries \(CFOI\)](#), there were 637 fatalities in the industry--an average of about 58 fatalities per year.⁴ Beginning in 2003, CFOI began reporting fatalities for the larger NAICS-classified landscaping services industry. There were 156 fatal occupational injuries in that industry in 2003. (See table.) The fatality rate for this industry was 14.1 fatalities per 100,000 employed workers, compared with the overall rate of 4.0 for all workers.

The CFOI provides a glimpse into the demographics of the workers killed on the job and a categorization of the circumstances surrounding the incident. In the case of the ornamental shrub and tree services industry, all 70 decedents in 2002 were men. In fact, of the 637 fatalities in this industry over 11 years, only 5 were female. About two-thirds of the fatalities occurred among wage and salary workers--those employed by a firm in the shrub and tree service industry. The remaining one-third were self-employed individuals. While the NAICS landscaping services industry in 2003 employed more people and suffered more fatalities, the same patterns held true--most of the decedents were men and about two-thirds were wage and salary workers.

While the age of the fatally injured shrub and tree industry workers ranged from mid-teens to 65 and over, the majority were ages 25 to 54. The distribution of fatalities by age was very similar to the distribution of all fatalities by age, regardless of industry. Further, the age distribution in 2002 was little changed from the entire 11-year period for which data are available.

The number and proportion of fatally injured employees in the shrub and tree services industry who were identified as Hispanic has risen in recent years. In the first year of the Census, 1992, there were 4 decedents identified as Hispanic

among the 36 fatalities in the industry, or about 11 percent. In 1997, 6 Hispanics were killed among a total of 67, or about 9 percent. However, in 2001, 12 of the 75 fatalities (16 percent) were Hispanic and in 2002, 17 of 70 fatalities (24 percent) were Hispanic. (See chart.) This is consistent with the overall rise in fatalities among Hispanics in all industries.⁶ Looking at 2003 data for the larger landscaping services industry under NAICS, Hispanics represented about 28 percent of the total fatalities.

There were 4 types of events that led to most of the fatalities among workers in the shrub and tree services industry--struck by an object (typically a tree); fall to a lower level (typically out of a tree); contact with electric current (such as when a limb hits a live electrical wire); and a transportation incident (either a collision between vehicles or a worker struck by a vehicle).⁷

While these categories provide an overall view of the events leading to the fatality, some anecdotal evidence provides more details about the fatal events.⁸

- Those workers who were struck by a tree included cases where a tree they were cutting fell forward onto them. There were also instances where the tree that struck the decedent was being cut down by a co-worker.
- There were a number of cases where those cutting down trees were attempting to move from the path of a falling tree when they slipped or tripped and could not get out of the way in time.
- In several instances, fatally injured workers were described as wearing protective clothing or using protective equipment.
- Those who fell to their death included falls from ladders, roofs, and trees. In some cases, the incident occurred when the worker cut through a safety line.
- Electrocutions occurred when workers (or a branch, or a tool or other piece of equipment that the worker was touching) came in contact with high voltage lines or electric transformers.
- Some transportation incidents involved vehicles that were being used during a landscaping operation, such as a tractor being used to remove stumps overturning onto the driver.
- Other transportation incidents involved vehicles operated by others hitting the landscape worker, such as workers on the side of a road being struck by a vehicle.

The data presented here are examples of the variety of information available from the CFOI program, even for very small industries. While the change in industry classification system has resulted in the elimination of data for some smaller industries, such as ornamental shrub and tree services, it provides new data for other industries. For example, in the past, fatalities in the restaurant industry were all included in one category; now data are available separately for full-service restaurants, limited service restaurants (including fast food establishments), snack bars, and mobile food services (such as ice cream trucks). Beginning with the 2003 census, all future CFOI data will be presented under the new NAICS classifications, with data available for as many unique industries as possible.

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End Notes

¹ For a discussion of changes in employment by industry, see Teresa L. Morisi, "Recent changes in the national Current Employment Statistics survey," *Monthly Labor Review*, June 2003, pp. 3-13.

² For a complete description of the Standard Industrial Classification system and the North American Industry Classification System, including a list of codes and definitions, go to www.bls.gov/bls/naics.htm.

³ Employment data are from the BLS Current Population Survey.

⁴ The Census of Fatal Occupational Injuries (CFOI) provides the nation's most accurate count of fatal workplace injuries. Data are captured from multiple sources designed to confirm the work-related nature of the fatality and to verify the accuracy of data elements. Available data include demographic characteristics of the decedent, information about the occupation and industry in which the worker was employed, and descriptions of the event or exposure that led to the fatality. More information about the CFOI program is available at www.bls.gov/iif.

⁵ In addition to data on fatal work injuries, the Bureau of Labor Statistics also provides data on nonfatal workplace injuries and illnesses through the Survey of Occupational Injuries and Illnesses. These data also changed industry classification systems in 2003. While workplace

injury and illness data are available for many detailed industries, no data are available for the ornamental shrub and tree services industry (SIC 0783). Data are available for the broader landscape and horticultural services industry (SIC 078). Beginning in 2003, nonfatal workplace injury and illness data are available for the landscaping services industry (NAICS 561730). More information about the Survey of Occupational Injuries and Illnesses is available at www.bls.gov/iif.

6 For information on fatalities among foreign-born workers, see Katherine Loh and Scott Richardson, "Foreign-born workers: Trends in fatal occupational injuries, 1996-2001," *Monthly Labor Review*, June 2004, pp. 42-53.

7 CFOI classifies the fatal incident in a number of ways, including event or exposure (defined as the manner in which the injury was produced or inflicted by the source), primary source (defined as the object, substance, or exposure that directly produced or inflicted the injury), and secondary source (defined as the object, substance, or person that generated the source of injury or that contributed to the event or exposure). For example, in the case of a worker who is electrocuted, the event might be "contact with overhead power lines" (a component of "contact with electric current"), the primary source would be "electrical wiring" (a component of "machine, tool, and electric parts"), and the secondary source might be "trees, logs," if the tree came in contact with the electrical source.

8 In addition to the many data elements captured in the CFOI program, narrative descriptions of the incident are prepared. These descriptions are used to confirm the circumstances of the incident; they can also provide additional details of the fatality beyond those included in the CFOI data elements. Because these data are confidential, the information presented here includes summaries and highlights from numerous fatalities and does not refer to any one incident.

Table. Fatal occupational injuries by selected industry, 1992-2003

Characteristic	Ornamental shrub and tree services (SIC 0783), 1992-2002	Ornamental shrub and tree services (SIC 0783), 2002	Landscaping services (NAICS 56173), 2003
Total:	637	70	156
Employee status:			
Wage and salary workers(1)	411	42	102
Self-employed(2)	226	28	54
Sex:			
Men	632	70	154
Women	5	--	--
Age:			
16 to 17 years	5	--	--
18 to 19 years	17	3	--
20 to 24 years	78	7	19
25 to 34 years	176	14	34
35 to 44 years	160	24	36
45 to 54 years	110	11	29
55 to 64 years	62	8	22
65 years and over	25	3	10

Footnotes:

- (1) This category 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) In this study, the racial categories "White" and "Black or African American" do not include persons from the ethnic category "Hispanic or Latino." Hispanic or Latino persons may identify themselves racially as white, black, or another race category.
- (4) The primary source of injury identifies the object, substance, or exposure that directly produced or inflicted the injury.
- (5) 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.

NOTE: Dashes indicate no data or data that do not meet publication criteria. Totals for major categories may include subcategories not shown separately.

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

Characteristic	Ornamental shrub and tree services (SIC 0783), 1992-2002	Ornamental shrub and tree services (SIC 0783), 2002	Landscaping services (NAICS 56173), 2003
Race or ethnic origin: ⁽³⁾			
White	489	49	87
Black or African American	45	3	18
Hispanic	83	17	44
Event or exposure:			
Contact with objects and equipment	225	22	52
Struck by object	197	21	45
Struck by falling object	164	18	43
Caught in or compressed by equipment or objects	23	--	4
Caught in running equipment or machinery	17	--	
Falls	207	20	38
Fall to lower level	204	19	38
Fall from ladder	17	4	3
Fall from roof	3	--	
Exposure to harmful substances or environments	119	13	23
Contact with electric current	112	13	17
Exposure to caustic, noxious, or allergenic substances	3	--	
Oxygen deficiency (including drowning)	4	--	4
Transportation incidents	78	15	38
Highway incidents	34	7	20
Collision between vehicles, mobile equipment	14	5	14
Non-collision incidents	12	--	3
Non-highway incident, except rail, air, water	15	--	12
Overtuned	9	--	8

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

Characteristic	Ornamental shrub and tree services (SIC 0783), 1992-2002	Ornamental shrub and tree services (SIC 0783), 2002	Landscaping services (NAICS 56173), 2003
Automobiles	10	--	
Trucks	55	12	16
Tractors	8	--	7
Worker struck by vehicle, mobile equipment	28	6	4
Assaults and violent acts	5	--	4
Primary source:(4)			
Vehicles	79	14	30
Highway vehicles	71	13	21
Plant and industrial powered vehicles, tractors	8	--	7
Structures and surfaces	199	18	38
Floors, walkways, ground surfaces	191	18	37
Machinery	48	7	15
Agriculture and garden machinery	5	--	8
Construction, logging, and mining machinery	27	3	5
Material handling machinery	16	3	
Parts and materials	71	4	9
Machine, tool, and electric parts	61	3	6
Persons, plants, animals, and minerals	192	22	45
Trees, logs	185	22	44
Tools, instruments, and equipment	41	5	6
Other	6	--	12
Bullets and pellets	--	--	3
Secondary source:(5)			
Vehicles	25	6	19
Highway vehicles	23	6	18
Structures and surfaces	14	4	3

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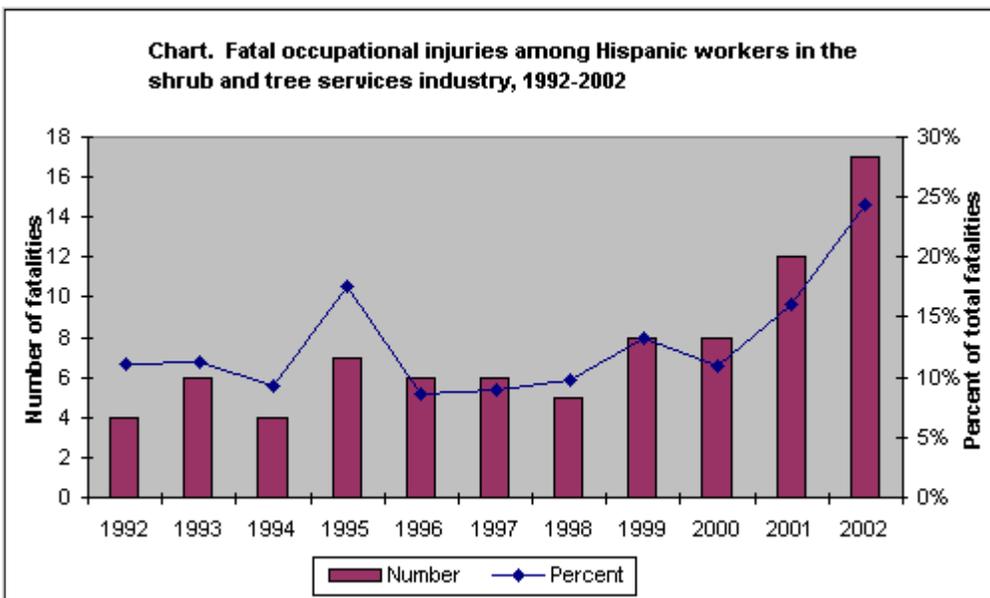
Characteristic	Ornamental shrub and tree services (SIC 0783), 1992-2002	Ornamental shrub and tree services (SIC 0783), 2002	Landscaping services (NAICS 56173), 2003
Floors, walkways, ground surfaces	7	--	3
Structures	4	--	
Machinery	43	--	9
Parts and materials	67	9	16
Machine, tool, and electric parts	57	9	9
Persons, plants, animals, and minerals	178	17	34
Trees, logs	173	16	29
Tools, instruments, and equipment	35	3	11
Other	6	--	5
Liquids (including water)	--	--	3
No secondary source	266	27	59

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



Data for Chart. Fatal occupational injuries among Hispanic workers in the shrub and tree services industry, 1992-2002

Year	Number of Fatalities	Percent of total fatalities
1992	4	11%
1993	6	11%
1994	4	9%
1995	7	18%
1996	6	9%
1997	6	9%
1998	5	10%
1999	8	13%
2000	8	11%
2001	12	16%
2002	17	24%

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